

*L.C. Chs. Ord.  
2-29-63*

B I O L O G I A  
"CENTRALI-AMERICANA.

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I N S E C T A.

LEPIDOPTERA-HETEROCERA.

VOL. IV.

TINEINA, PTEROPHORINA, ORNEODINA,

AND

PYRALIDINA AND HEPIALINA (part.).

BY THE

RIGHT HON. LORD WALSINGHAM, M.A., LL.D., F.R.S.

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1909-1915.





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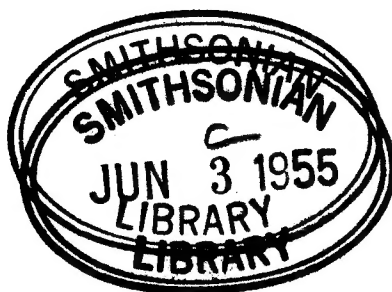
\* Previously enumerated in Vol. I-II.

† To be added to those enumerated in Vol. II.

## CORRIGENDA.

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Page	Line			
43	6 from top,	For <i>Gelechiadiae</i>	read <i>Gelechiadae</i> .	
72	3 „ bottom,	„ <i>Cathagesis</i>	„ <i>Cathegesis</i> .	
150	10 „ „	„ <i>HOLOCERA</i>	„ <i>HOLCOCERA</i> .	
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228	3 „ top,	„ <b>Phaleana</b>	„ <b>Phalaena</b> .	
241	13 „ bottom,	„ <i>SAROLOPHA</i>	„ <i>SOROLOPHA</i> .	
375	18 „ „	„ <i>PILANOPHORA</i>	„ <i>PILANAPHORA</i> .	
406	10 „ „	„ <i>auriciliela</i>	„ <i>auriciliella</i> .	
412	last line,	„ paronymous	„ isonymous.	



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## INTRODUCTION.

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THIS treatise on the *Tineina* of Central America, although it bears my name, is the combined work of three specialists, of whom the other two have assuredly borne a greater burden of critical labour than myself. Had it not been for the conscientious zeal and ability with which they have applied themselves to the task of coordinating the structural characters on which the classification here adopted has been based, the prospect of imparting full scientific value to this part of the 'Biologia' would have been remote. In thanking Mr. August Busck for the invaluable assistance he has rendered, I must not omit also my acknowledgments to Dr. O. Howard, Chief of the Bureau of Entomology, U.S. Department of Agriculture, Washington, who was good enough to grant the necessary permission and to spare his services for some months for this purpose. I regard this as another proof of that open-minded liberality which I have personally found to be an almost invariable attribute of American men of Science.

I can only hope that the study of much accumulated material to which he could not have access in the United States, and especially the examination of the types of many important genera in my collections, may have afforded Mr. Busck some slight return for his labour and for having given me the advantage of that very special knowledge of the North American fauna which he alone could bring to bear upon my task. I had written the majority of the descriptions of species several years ago, many of them during absences from home without access to books or collections; consequently but few had been placed with certainty in their proper genera until my assistant, Mr. J. Hartley Durrant, was able to examine and arrange them. When the more serious work was commenced, it became at once apparent that the lines of classification hitherto adopted, whether in Europe or America, were too involved and incomplete to be safely relied upon in dealing with a fauna practically unknown in relation to this special group of the *Lepidoptera*, and it was decided to correlate the various systems and to revise the limits of hitherto-accepted family-divisions, continuing the work already done for me by Mr. Durrant in connection with

a study of the *Microlepidoptera* of Tenerife published in the 'Proceedings of the Zoological Society of London' [1907 911-1028 Pl. 51-3 (1908)].

With this object the voluminous publications of Mr. Edward Meyrick on Australian as well as on European and Asiatic *Tineina* were again carefully consulted. My colleagues and myself have derived the utmost assistance now as in the past from his careful and systematic work. Indeed, whatever criticism may be brought to bear on its details, that work has undoubtedly supplied the guiding principles on which improvements in classification have been and may be arrived at in proportion to the amount of new material becoming from time to time available for further study. Mr. Busck and Mr. Durrant have been jointly engaged in a minute examination of a very large number of the types of species in my collections from all parts of the world, in making microscopic slides, and tabulating the numerous genera previously known, as well as those now first described, in a manner which it is hoped may be found to provide a sufficiently workable key to their structure and development. Mr. Busck has also supplied further material acquired since his return to America.

In any case the value of co-operation in such work must necessarily be great. No uncertainty need exist in future as to what is the precise meaning of the terms used by leading authors on either side of the Atlantic; there cannot fail to be increased confidence between them in the knowledge that both are working on similar lines—their descriptions must be rendered in every way more intelligible to each other and, we may hope, more precise.

There has long been a growing conviction that, for generic purposes at least, secondary sexual characters so much in repute with the older writers could not be relied upon, and in this treatise these have been discarded in favour of distinctions found in both sexes. It is perhaps the first occasion on which this principle has been consistently applied to the classification of the *Tineina* as a whole. Its adoption has necessarily involved the suppression of a very large number of generic subdivisions, and of the names by which they have been distinguished. This will at first be regarded as a very radical and perhaps presumptuous reform, especially as here exemplified in the *Stenomidae*, *Acrolophidae*, *Tortricidae*, etc., but, when the modifications of structure on which genera have hitherto been based in these and other families are carefully examined in relation to the vast number of forms in a great continental fauna, they are found to blend one into another by such infinitesimal gradations as to impede rather than to assist a conscientious worker. The genus *Felderia*, resting upon the strongly bipectinate antennae of the male, and some of Mr. Meyrick's genera of *Oecophoridae*, founded upon differences in the length of the antennal ciliations, are cases in point. These characters are modified by such

innumerable and minute variations as to be quite unreliable for the purpose of logical differentiation.

In the *Acrolophidae* again, as already pointed out (*vide* pp. 378-80), the position and length of the male palpi, which had been greatly relied upon, vary by the most gradual and perplexing stages, so that it may well be said in words which I extract from a letter in English long since received from the late Professor Zeller "*the passages from which to it*" form a chain of evidence too strong to be broken down in any attempt to separate extreme forms.

In the *Tortricidae* the costal fold, although a purely sexual character, was a convenient mark of recognition frequently regarded as of generic value; but this occurs sporadically among many species which, although undoubtedly distinct, present no other structural peculiarities to justify their inclusion in different genera—notwithstanding the fact that this character is apparently consistent in whichever species may possess it.

Central American representatives of the *Tineina* are to be found in at least 22 families, of which the *Gelechiadae* with 228 species, and the *Stenomidae* with 144, afford more abundant examples than others. Among these the *Gelechiadae* may be said to extend in approximately equal numbers to north and south, although the southern or South American forms are for the most part distinguished from those of the United States and Canada by their affinities to such genera as *Strobisia* Clms., *Anacamptis* Crt., and *Dichomeris* Hb., the first of these unrepresented in Europe, whereas the northern forms are more obviously allied to those of the European fauna. The *Stenomidae*, again, accompany the *Gelechiadae* in both directions, but tend strongly to represent the southern rather than the northern fauna, and the same may be said of the *Hyponomeutidae*; whereas the *Nemophoridae*, well represented in more northern latitudes, vanish entirely to the south of Panama, reappearing in certain limited forms to the far south of the continent. The *Acrolophidae*, strictly confined to the two American continents and to the West Indian Islands, are perhaps pre-eminently tropical, but with considerable southern and northern extension—this very distinctly recognisable family has afforded strong evidence in favour of discarding secondary sexual characters when determining the limitation of genera. The *Acrolophidae*, after an immense amount of careful work involving the examination of many hundreds of specimens, are found to consist practically of one large genus, represented by many species, in some of which the neuration is so variable as to forbid the establishment of genera upon the numbers, position, or furcation of veins in the radial or median series of the forewings. The species can, however, be distinguished *inter se* by the length and position of the labial palpi, by the structure of the antennae, and by the

form of the genitalia; but all these are secondary sexual characters, and no single character, or combination of characters, is found sufficiently constant throughout any assemblage of species to justify the establishment of a recognisable genus, with the exception of *Apoclis*, proposed on account of the peculiarity of the cubital veins of the forewings, and *Urbara* Wkr., which possesses the same cubital neurulation, but is in other respects even more distinct from the typical forms. Greater or less degrees of structural difference are accompanied with remarkable and confusing similarity of markings and general appearance. In the case of the genitalia, the divergences might even convey an impression that they have been evolved to prohibit interbreeding in instances where, without such precautions, confusion would be expected to occur. Some of these conclusions were not only surprising, but disappointing to a small committee decidedly predisposed to the retention and establishment of separate genera, and we were constrained to admit that if any one of our number, at a distance from the others, had ventured upon such a bold course of amalgamation as has been finally adopted, he might well have been in danger of being regarded by the other two as an entomological crank, whose destructive work served only to stimulate their own preferably constructive tendencies. If any safety is to be found in numbers, we may claim at least the advantage of unanimity, until good evidence can be produced to upset our conclusions, and Mr. Meyrick's latest papers give us good ground for claiming a general concurrence on his part.

It was inevitable that in the course of this study much attention had to be given to questions of nomenclature, and, being responsible for the code known as the 'Merton Rules,' Mr. Durrant and myself were anxious to ascertain on what grounds the members of a recent Zoological Congress had adopted what seemed to be a somewhat arbitrary system of selecting and maintaining Generic names by summary fixation of types without due regard for previous work done by critical authors. The rule that the Type of a genus cannot be regarded as fixed until it has been actually and definitely specified is now being largely adopted in America and perhaps elsewhere, but it is by no means clear that those who accept this code were made fully acquainted with the reasonable objections to such a course.

The main object of any Rules should surely be to secure priority and uniformity: priority not only for names, but for all published results of critical study; uniformity not by mere arbitrary decision, but by the application of unvarying principles which, consistently followed, could only lead to one definite result in each case—a result which, while securing priority in the fullest degree, should preserve for each worker the credit of his work until it could be proved to be incorrect.

The rock on which the greatest split seems to have occurred has been the adoption

of Hübner's genera by Stephens in 1834-5. Stephens, admittedly dealing with a local fauna—that of Great Britain,—interpreted many of Hübner's genera by the light of such knowledge as he possessed, and it has been contended that he did not claim to be revising the 'Verzeichniss' when he adopted Hübner's generic names and applied them to such British species as he recognized among Hübner's types; but, as in the case of other critical workers, it can be shown that Stephens was thoroughly acquainted with his subject, and by no means acted in the dark when he selected certain species to which he assigned Hübner's generic names. He specially stated that some of Hübner's genera required revision, and proceeded to apply his critical knowledge to the task—in short, he did at least attempt to revise Hübner's work so far as the knowledge of the day permitted it and so far as such revision was required for the work in hand. In any case, but largely for this reason, we contend that Stephens's limitations should be respected by subsequent authors, and this would probably be conceded after a careful study of his writings. We may perhaps go so far as to admit that an arbitrary rule is desirable for the future, but we contend that it should not be, and cannot be justly or advisedly, retrospective. For example, I consider that I should have had no right to cite *pomonella* as the type of *Cydia* Hübner (Pr. Z. Soc. Lond. 1897) if any other author had previously used *Cydia* with such limitations as had the effect of excluding that species; but Stephens having included *pomonella* among the three species of *Carpocapsa*, which he regarded as typical of *Cydia*, it was obviously so selected by him and the genus was thus restricted to the type\*.

For similar reasons Meyrick cannot, in my opinion, resuscitate *Mompha* Hübner for *conturbatella* after Stephens had disregarded that species in his modified conception of Hübner's genus†. No arbitrary rules can rightly be made retrospective to the detriment of past study. Without such modification the arbitrary fixation of types strikes a death-blow at the whole system of priority, and the work of generations of critical authors is placed at the mercy of any future writer who may perhaps be comparatively unacquainted with the subject on which he writes.

Is it too much to hope that by consistently advocating this view, and in each case giving reasons for selecting certain types of the older genera in cases where this has not already been done, we may in the end convince those representatives of international opinion to whom the Rules of Nomenclature may next be referred that they would do well to lay down the principle that the *arbitrary* fixation of types can have no retrospective effect to the detriment of previous critical study, but can only be taken as applying to the present and to the future?

\* *Vide* pp. 258-263—*cf.* Wlsm. Pr. Z. Soc. Lond. 1897 130; Cockerell New Mexico Agr. Coll. Bull. 25 47 (1898); Busck Jr. New York Ent. Soc. 11 106-11 (1903); Fernald Gen. Tortr. 6, 19, 58 (1908).

† *Vide* pp. 15-16—*cf.* Wlsm. & Drnt. Ent. Mo. Mag. 45 173-4 (1909).



Mr. Busck has generously allowed me to describe and include in our work a number of new species, collected by himself, Mr. F. Knab, and others in the Panama Canal Zone and in Mexico, which were not represented in Dr. Godman's collections, and these have afforded strong evidence that only the fringe of the subject has as yet been touched, and that the fauna of those regions will prove to be exceptionally rich in species and genera.

I am especially indebted to my friend Mr. W. Schaus for some interesting contributions to the collection kindly given me many years ago, and the results of his energy are further illustrated in the examples submitted by Mr. Busck from the National Museum at Washington, to which he has so generously contributed.

Dr. Godman's collectors were instructed to obtain insects of all orders, and had not the opportunity to devote special attention to the *Tineina*; consequently a large proportion of our material has consisted of unique specimens, which is greatly to be regretted. In the case of these small and often inconspicuous insects, it is specially important that a good series of each species should be secured to facilitate comparison of markings and structure—the latter almost impossible to certify without denudation under the microscope, for which it has sometimes been necessary to sacrifice the half of even a unique example.

In the course of our work one point has been made remarkably clear and indisputable. It has been shown by very numerous instances that in the majority of—although, of course, not in all—previous attempts to describe and even to illustrate differences of neurulation, whether for generic or special determinations, reliance has been placed on the system of moistening the wings with benzine and examining them with ordinary pocket-lenses of varying power, a system which for some of the main characters is frequently useful and sufficient. This has, however, proved to be the source of innumerable errors, easily detected when the wings are thoroughly denuded and placed under the microscope. I must plead guilty to several errors in the past from this cause, and the same has affected the work of others upon whose descriptions and drawings I have too frequently relied. In the United States this has long been recognised. Dr. Brackenridge Clemens (1860, etc.) and other more recent specialists, notably Mr. Busck, have invariably made microscopic slides where any doubt could exist. In this manner only can the internal veins of the cell, or the different degrees of anastomosis and coincidence in the supporting wing-structure, be intelligibly studied. Such a method can alone supply the necessary evidence for understanding the processes by which gradual changes of development or deterioration have been brought about, and this is becoming more than ever essential to correct study.



It was not originally my intention to transfer my collections and library to the National Museum until this work should have been completed; but the delay that has occurred in the elaboration of references to previous literature, and in the reproduction of Mr. Frohawk's excellent figures by lithography at Leiden, combined with other circumstances, rendered it impossible to postpone their departure, and the transference has not accelerated publication. The importance of securing the majority of the types, as such, for our National Museum has not been overlooked, and I should have been better satisfied if this object could have been achieved at an earlier date. The publication of the monograph of the Hawaiian "Micros," which was in hand when I first began to prepare a paper for the 'Biologia,' somewhat interfered with its earlier stages, but the great delay which has occurred in bringing this treatise to a successful conclusion has been for the most part due to the earnest desire of Mr. Durrant to carry it beyond its original scope and purpose, and to give it special value for the future guidance of all students of the Microlepidoptera. With this aim in view, he has undertaken far-reaching researches in the literature of the subject. He has looked up as far as possible every reference, not only to the species under consideration, but to the genera in which they have been placed by various authors, tracing the history of each genus, and, where amalgamation has become necessary, the type of each generic name is stated in chronological order, establishing priority which may be confidently accepted as such, unless an error can be subsequently proved. It is perhaps too much to hope that no such errors may henceforth be found, but there has been at least no attempt to suppress information, and the references given throughout should be clearly sufficient to indicate the lines on which further research may safely proceed. During the time that the Collections remained in my possession, when I was able to direct and examine the progress of the necessary comparisons and tabulation of genera and species, it was apparent that this work could not be done without much sacrifice of time and labour devoted to literary research, and the delay involved was even then a source of considerable annoyance and disappointment, not only to the Author and Projector of the 'Biologia' but to myself. I had written a large proportion of the descriptions of new species so long ago as 1895, soon after Dr. Godman's material was placed in my hands, and at that time I had every hope that a paper on the same lines as others in his great publication might have been completed within a few years at least. From that time onward not only has much additional material been added to the Collection, but much has been published from time to time affecting the questions of classification and nomenclature, as well as adding many species to the numbers recorded from the region included in the scope of the investigation.

Since April 1910, when my Collections (including the Godman and Salvin material) and Library were presented to the National Museum, I have been unable to exercise

any real superintendence over the literary work undertaken by my assistant, and beyond the mere description of a few newly acquired or possibly overlooked species, the task has been left entirely in Mr. Durrant's hands, and has been prolonged very far beyond my expectation as well as beyond his own. I greatly regret it has delayed the completion of the 'Biologia' so earnestly desired by Dr. Godman, but I hope that the thoroughness of the work done and the importance of the advance made in the general study of this interesting branch of entomology may afford some consolation and compensation for the patience with which it has been awaited.

June 1915.

WALSINGHAM.

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*Census.*

27 Families enumerated, 2 described as new.

225 Genera enumerated, 54 described as new, illustrated by 30 text-figures.

1025 Species enumerated, 586 described as new, illustrated by 10 plates including 350 figures.

1 Genus and 2 Species described as new from South America, and several species added to the fauna of the United States.

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*Explanation of Signs, Abbreviations, etc.*

♂ = male.

♀ = female.

○ = sex not stated.

θ = egg.

⊕ = larva.

D = pupa.

⊙ = imago.

\* = invalid as not containing the Type of the conception.

† = wrongly written either in inception or adoption.

‡ = a vernacular name.

± = correction of a name previously wrongly written.

§ = a homonym.

|| = a synonym.

nn. = a neonym.

LN. = a logonym.

MN. = a mononym.

PT. = a Paratype.

PTT. = Paratypes.

HT. = a Homotype.

---

**Dionym** = the name (*onym*) of a species as originally published in valid form, consisting of two terms, a species-name (*idionym*) combined with a genus-name (*genonym*).

**Idionym** = a species-name (without reference to the genus).**Genonym** = a genus-name (without reference to the species).**Mononym** = a genonym published without exponents (invalid as not dionymic, and as having no indication of its application).**Logonym** = a mere printed name (invalid as having no indication of its application).**Homonym** = the *same* name applied to a *different* conception (invalid as already in use in another sense).**Synonym** = a *different* name applied to the *same* conception (invalid, unless required to replace a homonym).**Isonym** = a *different* name applied to a *similar* conception (potentially valid: genonyms restricted to different types are isonymous so long as their Types are regarded as congeneric).**Neonym** = a new name to replace a homonym.

Drnt.

A. P. Chan  
Dec. 1909

# BIOLOGIA CENTRALI-AMERICANA.

## ZOOLOGIA.

### Class INSECTA.

### Order LEPIDOPTERA.

### Suborder HETEROCERA (continued) †.

### TINEINA.

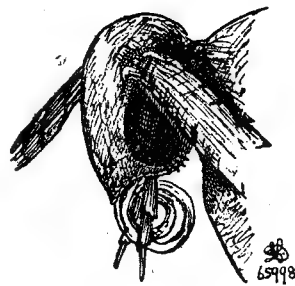
### Fam. 1. LAVERNIDAE.

LAVERNIDAE Wk., Stgr-Wk. Cat. Lp. Eur. 318 (1871); Hnmn. Schm. Deutsch. Tin. 415 (1876).  
= \* *ELACHISTIDAE* Stn. Ins. Br. Lp-Tin. 10, 224-5 no. 10 (1854); Meyr.; Stgr-Rhl.; etc.

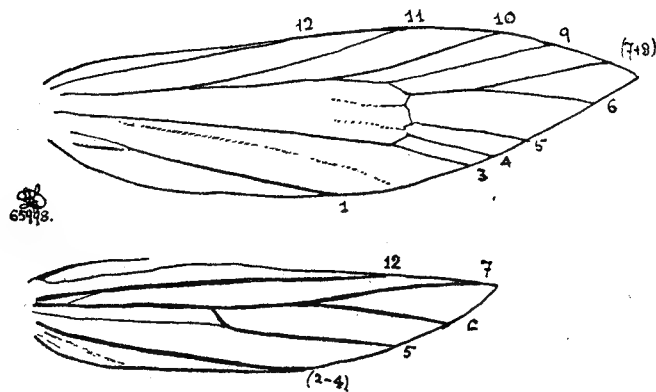
### PSEUDASTASIA, gen. n.

( $\psi\epsilon\upsilon\delta\eta\varsigma$  = false;  $\alpha\sigma\tau\alpha\sigma\iota\alpha$  = unsteadiness.)

Type: *Pseudastasia opulenta* Wlsm. (Tab. I. fig. 5.)



J. H. Durrant, del.



1. *Pseudastasia opulenta* Wlsm. ♂.

*Antennae* a little longer than the forewings, much flattened and dilated, taeniaform, tapering to a flattened point; fringed along their lower edge with long appressed scales; basal joint without pecten. *Labial*

† By The Right Hon. LORD WALSHINGHAM, M.A., LL.D., F.R.S., etc.  
BIOL. CENTR.-AMER., Heter., Vol. IV., December 1909.

bb Schaus collection

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*Palpi* very short, decumbent, smooth, pointed. *Maxillary Palpi* obsolete. *Haustellum* well-developed. *Ocelli* absent. *Head* smooth. *Thorax* smooth, stout, produced conspicuously in advance of the wing-base. *Forewings* narrow, elongate-lanceolate, costa slightly rounded beyond middle, dorsum evenly convex: *neuration* 10 veins, 7 and 8 coincident, 2 obsolete; (7+8) and 6 stalked, enclosing apex; 3, 4, 5, straight and parallel. *Hindwings* (—1), elongate-lanceolate, not acutely pointed: *neuration* 6 veins, 2+3+4 coincident; 6 and 7 stalked, 5 separate; cell open between 5 and cubitus; 12 free. *Abdomen* stout, smooth. *Legs* rather stout; hind tibiae with long, projecting tuft of closely packed hair-scales above the distal pair of spurs; hind tarsi rather densely clothed.

Allied to *Lithariapteryx* Chmb., *Scelorthus* Busck, and *Lamprolophus* Busck, but differing in the absence of raised scales, in the peculiar thick antennae, and in the stalking of 6 and (7+8) in the forewings.

### 1. *Pseudastasia opulenta*, sp. n. (Tab. I. fig. 5.)

*Antennae* black. *Palpi* and *Haustellum* ochreous. *Head* black. *Thorax* dark brownish fuscous, with some bright ochreous at the sides and behind, (but the thorax is much damaged). *Forewings* very dark fuscous, almost black, with shining steely lines marking the venation beyond the cell to the apex and termen; a broad, shining, golden-ochre band from the base to the tornus, its upper edge somewhat more intensely coloured than the dorsal portion, and clearly defined against the dark ground-colour of the wing above; cilia steely bluish black. *Exp. al.* 14 mm. *Hindwings* tawny brown; cilia pale brown, with some steely blue reflections. *Abdomen* purplish fuscous, with an ochreous band near the base, (but much damaged). *Legs* purplish fuscous, the femora golden ochreous beneath.

*Type* ♂ (65998) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* PANAMA: CHIRIQUI: Bugaba 800–1000 ft. (*G. C. Champion*). Unique.

### SCELORTHUS Busck.

*Type*: *Scelorthus pisoniella* Busck (Busck 1900).

SCELORTHUS Busck Jr. NY. Ent. Soc. 8 239–41 Pf. 9·4 (1900); Dyar Bull. US. Nat. Mus. 52 535 sp. 6075 (1902).

### 1. *Scelorthus calcifer*, sp. n.

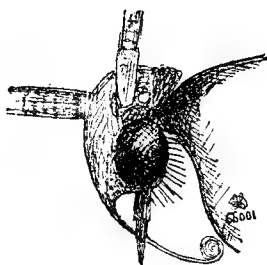
*Antennae* bronzy fuscous; the basal joint attenuate at its origin; a few of the terminal joints slightly biserrate. *Palpi* short, depressed; median joint whitish, terminal joint fuscous. *Head* bronzy above, mixed with orange-ochreous scales. *Thorax* bronzy fuscous, with two orange-yellow streaks parallel with the tegulae. *Forewings* shining, orange-yellow, with a purplish fuscous patch at the base, on which is a bronzy costal spot; along the upper edge of the fold is a gradually widening purplish shade, sprinkled with aeneous scales, occupying the whole outer portion of the cell and extending around the end of the wing, where it encloses a large ovate patch of the orange ground-colour; four aeneous metallic spots connect this with the costa and dorsum, two below the fold, the first at one-fourth from the base, the second scarcely before the middle, and two above the cell, one a little beyond the first dorsal spot, the other on the middle of the costa; on the outer third of the wing-length a broad aeneous band, commencing abruptly, passes around the base of the cilia on the costa and termen, beyond which the cilia are greyish fuscous. *Exp. al.* 13 mm. *Hindwings* orange-yellowish, becoming bronzy fuscous on their outer half; cilia greyish fuscous, shading to yellowish towards the base of the wing. *Abdomen* orange-yellow, tipped with purplish fuscous, some purplish fuscous shading along the sides beneath. *Legs* shining, bronzy, the posterior pair ornamented with metallic scales; two rich orange bands around the hind tibiae, and one on the first tarsal joint; the base of the spurs, and the spurs themselves, especially the outer ones, adorned with projecting dark metallic tufts which are slightly repeated also on the tarsal joints.

*Type* ♂ (65999) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (66000) US. Nat. Mus.]

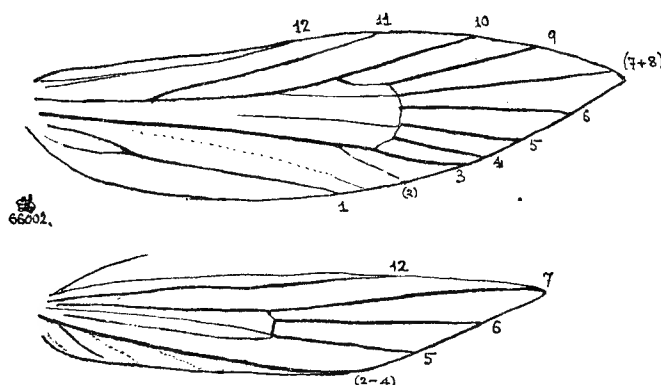
*Hab.* MEXICO: MORELOS: Cuernavaca, VI. (*H. H. Smith*): GUERRERO: Tierra Colorada, 2000 ft., X. (*H. H. Smith*). Two specimens.

## EMBOLA, gen. n.

(ἐμβολή = an insertion.)

Type: *Embola xanthocephala* Wlsm.

J. H. Durrant, del.

2. *Embola xanthocephala* Wlsm. ♂.

*Antennae* simple, nearly as long as forewings; basal joint without pecten. *Labial Palpi* short, slender, dependent, smooth, pointed. *Maxillary Palpi* minute. *Haustellum* long, naked. *Eyes* ciliate posteriorly. *Ocelli* very conspicuous. *Head* prominent, globose, smooth. *Thorax* smooth. *Forewings* elongate-lanceolate, pointed, termen subsinuate; smooth: *neuration*, 10 veins, 7 and 8 coincident, 2 obsolete; all separate, (7+8) to costa; 1 almost simple, 1<sup>b</sup> being subobsolete. *Hindwings* (-1), lanceolate, pointed: *neuration* 6 veins, cubitus simple (2+3+4); 5, 6, 7, separate, 5 supported by approximating branches of media; discoidal obsolete between 5 and cubitus. *Abdomen* somewhat slender. *Legs*, posterior tibiae with series of evenly projecting bristly hairs above throughout; spurs long, naked.

By *neuration* most nearly allied to *Scelorthus* Busck, but easily separable from this genus, as also from *Aetole* Chmb. (= \**Heliodines* Wlsm.—*nec* Stn.) by the structure of the hind legs, in which it agrees with *Lamprolophus* Busck, but differs in having only ten veins in the forewings, and in the hindwings 6 and 7 are not stalked.

In addition to the species now described, *Heliodines marginata* Wlsm. [Pr. Z. Soc. Lond. 1891 535, 547 sp. 123 (1892): 1897 109 sp. 132 (1897)], St. Vincent, W-I., is recognised as belonging to the genus *Embola*.

1. *Embola xanthocephala*, sp. n.

*Antennae* bronzy fuscous, apex white. *Palpi* short, slender, dependent; ochreous. *Head* orange-yellow. *Thorax* dark fuscous, with a bronzy sheen, especially on the tegulae. *Forewings* rich golden-orange, with shining, bronzy, lilac metallic spots, four along the costa, three along the dorsum, each followed by an inverted, similarly metallic, length-streak from before the apex; the first three costal spots, of which the second projects rather further over the surface of the cell than the other two, are set in a dark purplish fuscous shade-band, reaching to beyond the middle, and rather widened outward from its narrow origin at the base of the costa; the fourth costal spot, which is preceded and followed by golden orange, is very narrowly margined by purplish fuscous, as is also the short, inverted, metallic streak beyond it, the same dark colour spreading around the apex and enclosing the rather longer inverted streak pointing inward from the termen above the tornus, where it separates it from the erect anteternal metallic spot on the dorsum, which points to the space between the third and fourth costal; a narrow purplish fuscous streak from the base also connects the first and second dorsal spots to each other, but not to the third, the second of these being low and flattened; cilia smoky fuscous. *Exp. al.* 9.5 mm. *Hindwings* dark

bronzy cupreous; cilia smoky fuscous. *Abdomen* dark steely fuscous above, steely white beneath. *Legs* dark fuscous externally, the spurs and inner sides of hind tibiae steely whitish.

*Type* ♀ (66001) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (66003) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Three specimens.

## 2. *Embola dentifer*, sp. n. (Tab. I. fig. 6.)

*Antennae* stout, somewhat flattened; purplish fuscous, apex white. *Palpi* short, dependent; ochreous. *Head* dull orange. *Thorax* purplish fuscous. *Forewings* bright orange; the costa fuscous throughout, including the cilia, along it are distributed four dark, marginal, iridescent lilac metallic tooth-shaped spots, one basal, followed by two more before the middle, and one scarcely beyond the middle; a little beyond the last the dark marginal band is increased in width and is continued around the apex to the commencement of the tornal cilia, suffused with a lilac iridescent gloss throughout; the base of the dorsum is dark fuscous, and beyond the base are three lilac iridescent tooth-shaped spots attenuated with the costal spots above them, the outer one of the series coalescing with the dark marginal band beyond it, the space between the dorsal spots being unshaded with fuscous. *Exp. al.* 13 mm. *Hindwings* dark cupreous, beautifully iridescent in a strong light; cilia cupreous. *Abdomen* brownish fuscous, anal tuft ochreous. *Legs* cupreous, banded with pale ochreous.

*Type* ♂ (66004) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: MORELOS: Cuernavaca, VI. (*H. H. Smith*). Unique.

## COSMOPTERYX Hb.

*Type*: *Tinea zieglerella* Hb. (Z. 1839).

COSMOPTERYX Hb. Verz. Schm. 424 sp. 4126-32 (1826); Stn. Ins. Br. Lp-Tin. 228-9 Pl. 7·4<sup>a-h</sup> (1854); Wlsm. Tr. Ent. Soc. Lond. 1891 124 (1891); Meyr. HB. Br. Lp. 640, 662 no. 5 (1895); Wlsm. Pr. Z. Soc. Lond. 1897 105-7 sp. 123-6 (1897); Meyr. Pr. Lin. Soc. NSW. 22 299, 338-41 sp. 79-83 (1897); Stgr-Rbl. Cat. Lp. Pal. II. 184-5 sp. 3550-9 (1901); Dyar Bull. US. Nat. Mus. 52 534-5 sp. 6061-74 (1902); Busck Pr. US. Nat. Mus. 30 707-13 (1906); Wlsm. Pr. Z. Soc. Lond. 1907 964-7 sp. 75-7 (1908); Meyr. Pr. Z. Soc. Lond. 1908 733-4 (1908).

## 1. *Cosmopteryx irrubricata*, sp. n. (Tab. I. fig. 1.)

*Antennae* dark brown, with a series of narrow white streaklets above toward the base, and two silvery rings at two-thirds; the basal joint has also narrow silvery streaks along on either side. *Palpi* bronzy cinereous, the terminal joint with a fuscous line on either side. *Head* pale greyish brown; face steel-grey. *Forewings* dark brown, with a slightly paler band across the base, and another beyond the middle, the latter not reaching the costa; at the outer edge of the pale basal band are three small steel-blue strigulae, the two upper ones very short, the third below the fold, about double their length; before the second pale band a narrow, metallic, rosy lilac fascia crosses the wing, a similar fascia occurring at the outer edge of the band, but like it failing to reach the costa; beyond this is a metallic lilac dorsal streak, half-way to the apex, with a silvery white costal spot above and between the two; the cilia at the extreme apex snow-white, above and beneath the apex brown. *Exp. al.* 7·5 mm. *Hindwings* and cilia greyish brown. *Abdomen* [missing]. *Legs* greyish brown, with steel-white metallic streaks across the tibiae, and snow-white spots at the joints of the tarsi.

*Type* ♂ (65991, *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* AMERICA, C-I. Central America—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). West Indies—JAMAICA: ST. ANN: Runaway Bay, 18. III. 1905 (*Wlsm.*). Two specimens.



This species, which is closely allied to *abnormalis* Wlsm. (Hayti), differs in the varied colour of the metallic markings, and in the presence of a subterminal spot before the apex.

## 2. *Cosmopteryx ochleria*, sp. n. (Tab. I. fig. 2.)

*Antennae* brownish fuscous, with a slender white line along the upper side; the terminal four joints white; the next five fuscous, then one fuscous between two white. *Palpi* white, with a fuscous line along either side. *Head* and *Thorax* brownish fuscous, with slender white lateral lines. *Forewings* brownish fuscous, with a dull ochreous median band, obliquely margined with pale golden metallic on either side, the inner margin slanting outward, entire, with a black dot above its middle within the band, the outer margin slanting inward, broken above its middle, and with a white spot on the costa at its upper edge; a slender silvery white entire streak through the dark brownish fuscous terminal area and cilia to the apex; the three white streaklets on the basal area are as usual, the upper one bent, the second very short, not extending beyond the upper, the third commencing parallel with the second, but exceeding it in length. *Exp. al.* 8.5 mm. *Hindwings* and cilia brownish grey. *Abdomen* brownish. *Legs* brownish, banded with white; an oblique white streak before the ends of the tibiae externally.

*Type* ♂ (65993) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

This species differs from *turbidella* Rbl. in the longer white apical streak, in the broader ochreous fascia, and in the greater length of the lower three streaklets on the basal area.

## 3. *Cosmopteryx astrapias*, sp. n. (Tab. I. fig. 3.)

*Antennae* dark bronzy brown, with a line of white spots along the upper side, some near the base becoming confluent and continuous with a streak along the basal joint; four or five of the terminal joints are white, and these are preceded by a band of five brown joints, following two other white ones. *Palpi* silvery, shaded with fuscous along their outer sides and before the extreme apex which is white. *Head* bronzy brown; face steel-white. *Thorax* dark bronzy brown, without lines. *Forewings* dark bronzy brown, a yellow fascia commencing at the middle of the wing, of which the inner edge is almost straight, margined by confluent pale golden metallic spots, against the upper one of which is a black dot; at the outer edge of the fascia are two similar pale golden metallic spots, perpendicularly placed, one above the other, and of about equal size, the yellow edge of the fascia projecting between them, but not reaching beyond them, a slender silvery streak running to the apex from the yellow projection; there is no conspicuous white streak in the cilia above the outer golden costal spot, but two or three white hair-scales are visible; on the dark basal half of the wing the usual silvery strigulae are arranged as follows, one from the base below the costa, slightly depressed at its outer end, and terminating below the commencement of a similar, but much shorter, subcostal streak, running nearly to the metallic edge of the fascia; from about the base of the fold another slender streak reaches a little further than the one above it, and below the fold is a shorter streak extending even further than the last, but not produced toward the base; cilia bronzy brownish. *Exp. al.* 8 mm. *Hindwings* and cilia bronzy brownish, slightly paler than the forewings. *Abdomen* shining, bronzy brown. *Legs* brownish fuscous, with white spots above the bases of the partly white spurs; hind tarsi white.

*Type* ♀ (65996) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

Much resembling *attenuatella* Wkr., but the projection from the yellow band is not nearer to the costa than to the dorsum and there are no strigulae on head or thorax.

#### 4. *Cosmopteryx xanthura*, sp. n.

*Antennae* whitish beneath, barred with black above, the bars connected by a slender black line to two-thirds; broadly banded with white at two-thirds, then again equally widely banded with black, the three or four terminal joints again white. *Palpi* very slender, terminal joint twice median; white, with slender length-lines on either side. *Head* brownish fuscous, iridescent on the crown; face shining, yellowish white. *Thorax* dark brownish fuscous, a slender steely metallic line dividing it posteriorly. *Forewings* dark brownish fuscous to their middle, a slender shining steel-grey line along the costa from the base, with three similar shorter lines below it, removed from the base; at about the wing-middle are two spots of pale golden raised scales, almost connected and forming an outwardly oblique fascia from costa to dorsum, there is a black dot on the outer edge of the costal spot; these spots encroach upon a broad bright ochreous yellow band, which sends a slender curved streak of the same colour to the apex and through the apical cilia, bounded on either side by dark brownish fuscous, but more widely and conspicuously above than beneath; before the brown colouring is another pair of raised golden spots, placed obliquely in reverse direction from the previous pair, a few light ochreous scales succeeding the upper one in the costal cilia; cilia shining, brownish grey. *Exp. al.* 8-8.5 mm. *Hindwings* blue-grey at the base, becoming brownish grey toward the apex; cilia brownish grey. *Abdomen* brownish fuscous, illuminated at the side with steel-grey; underside silvery white. *Legs* brownish fuscous, with silvery white bands around the base of the spurs, the tibiae between them being bristly with black hairs above; spurs and ends of hind tarsi silvery white.

*Type* ♂ (65987) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65988) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Four specimens.

Undistinguishable from *sanctivincenti* Wlsm., except in the white end to the antennae and the broad white band before the subterminal dark band.

#### 5. *Cosmopteryx diaphora*, sp. n.

*Antennae* brown above, whitish beneath, with about four pale straw terminal joints, these preceded by three brown joints, after one brown, between two pale straw. *Palpi* pale straw, with a slender fuscous line along either side. *Head* and *Thorax* brownish fuscous, with a slender white central streak, but no lateral streaks. *Forewings* brownish fuscous as far as the middle, thence broadly banded with pale straw-yellow, the inner edge of the band running obliquely outward from costa to dorsum, margined by two golden metallic spots, one below the costa accompanied by a black dot, the other beyond it resting on the dorsum; scarcely beyond the middle of the band are two similar, but opposite, pale golden metallic spots, one at the costa, with a few scales running outward from it through the cilia, the other on the dorsum; on the dark basal half of the wing the usual silvery white strigulae are present, the first slightly bent downward at its apex, the second and third parallel to each other, but not quite reaching the pale band, the lower one being rather more than half the length of the median; beyond the yellow band the only repetition of the brownish fuscous colour is found in a rather broad apical streak, bounded on its lower edge by a silvery white line running with it to the extreme apex of the cilia; the costal cilia above it are tipped with yellowish, those below the silver line also yellowish, shading to brownish grey along the dorsum. *Exp. al.* 7.5-8.5 mm. *Hindwings* pale grey; cilia brownish grey. *Abdomen* brownish. *Legs* brownish grey, with yellowish white spurs; median pair with a yellowish white tuft at their base; hind tarsi faintly banded with yellowish white.

*Type* ♂ (65994) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65995) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

Allied to the somewhat larger *coryphaea* Wlsm., from Tenerife, but differing in the oblique anterior margin of the pale band, and in the length and direction of the basal strigulae.

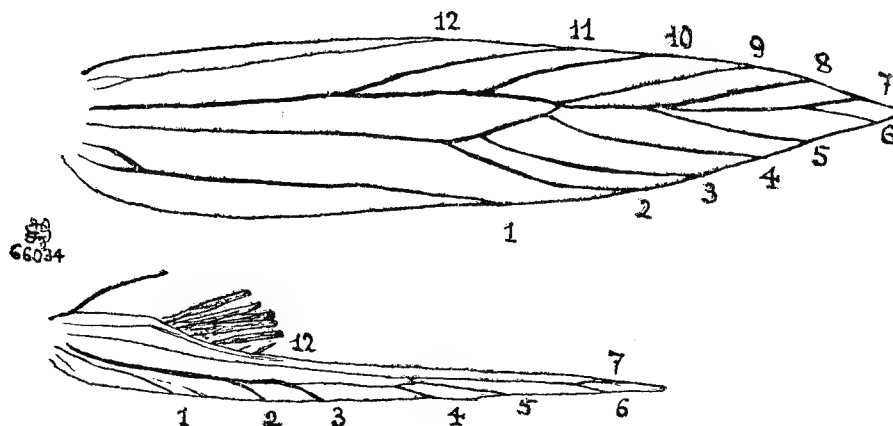


## ERITARBES, gen. n.

(ἐπιταρβής = very timid.)

Type: *Eritarbes otiosa* Wlsm. (Tab. I. fig. 11.)

J. H. Durrant, del.

3. *Eritarbes otiosa* Wlsm. ♂.

*Antennae* (—1), slightly serrate; basal joint with single pecten. *Labial Palpi* recurved, divergent, reaching the length of the head beyond it; both joints somewhat thickened with smoothly appressed scales. *Maxillary Palpi* minute. *Haustellum* moderate. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* elongate-lanceolate, without tufts of raised scales: *neuration* 12 veins; 7 and 8 stalked, to costa; 6 out of 7 beyond 8; 5 out of stalk of (6+7+8); 9 connate with stalk of 8-5, rest separate; 1 basally furcate. *Hindwings* (— $\frac{1}{2}$ ), linear-lanceolate, cilia 5-8: *neuration* 8 veins; 6 and 7 stalked, rest separate, 4 closely approximate to 5. *Abdomen* moderate. *Legs*, hind tibiae rough-haired above.

This genus agrees in *neuration* with the description of the Australian *Haplochrois* Meyr. [Pr. Lin. Soc. NSW. 22 310 (1898)], but the different palpi and narrower hindwings easily separate *Eritarbes* from Meyrick's genus, which would appear to contain two forms differing in the origin of vein 5 in the forewings.

1. *Eritarbes otiosa*, sp. n. (Tab. I. fig. 11.)

*Antennae* smoky fuscous, becoming silvery white on their terminal fourth. *Palpi* bronzy fuscous on their inner sides, blackish externally. *Head* bronzy fuscous. *Thorax* dark smoky fuscous, with a brownish tinge posteriorly. *Forewings* dark olivaceous brownish, much suffused with smoky fuscous, especially along the costa and at the apex, including the apical cilia, the only indication of any marking being a minute blackish dot in the fold beyond its middle; dorsal cilia dark smoky grey. *Exp. al.* 8-8.5 mm. *Hindwings* bronzy fuscous; cilia dark smoky grey. *Abdomen* dull smoky fuscous. *Legs* smoky fuscous, with a pale bronzy tinge on their inner sides.

*Type* ♂ (66026) Mus. Wlsm. (*Godm-Salv. Coll.*). [PTT. (66029, 66031, 66033) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Nine specimens.

## STILBOSIS Clms.

*Type*: *Stilbosis tesquella* Clms. (Clms. 1860).

STILBOSIS Clms. Pr. Ac. Nat-Sc. Phil. 12 170 (1860): Clms-Stn. Tin. N-Am. 129-30 (1872); Dyar Bull. US. Nat. Mus. 52 539 sp. 6127 (1902).

### 1. *Stilbosis tesquella*, Clms.

=†*tesquatella* Chmb. ; =*quinquecristatella* Chmb.<sup>5</sup>

*Stilbosis tesquella* Clms. Pr. Ac. Nat-Sc. Phil. **12** 170 (1860)<sup>1</sup> : Clms-Stn. Tin. N-Am. pp. xii, 37, 40, 129-30 (1872)<sup>2</sup>. *Stilbosis tesquatella* Chmb. Bull. US. GG. Surv. **4** 162 (1878)<sup>3</sup>. *Laverna?* *quinquecristatella* Chmb. Jr. Cin. Soc. NH. **3** 293 (1881)<sup>4</sup>. *Stilbosis tesquella* Wlsm. Tr. Am. Ent. Soc. **10** 197 (1882)<sup>5</sup>; Dyar Bull. US. Nat. Mus. **52** 539 sp. 6127 (1902)<sup>6</sup>; Busck Pr. Ent. Soc. Wash. **5** 181, 202 (1903)<sup>7</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-7</sup>—ATLANTIC STATES<sup>6</sup>—MASSACHUSETTS<sup>4</sup> : Amherst<sup>4</sup>—PENNSYLVANIA<sup>1</sup>—DISTRICT OF COLUMBIA<sup>7</sup> : Washington, ⊕ *Amphicarpoea monoica*, VII, excl. VIII.<sup>7</sup> Central America—MEXICO : GUERRERO : Amula, 6000 ft., VIII. (*H. H. Smith*).

### 2. *Stilbosis incincta*, sp. n. (Tab. I. fig. 9.)

*Antennae*  $\frac{2}{3}$ ; whitish, barred with dark brownish fuscous above throughout. *Palpi* dependent, curved outward, median and terminal joints of about equal length; whitish, shaded with brownish fuscous beneath, a ring of the same at the apex of the median joint, and another before the apex of the terminal. *Head* steel-whitish above; face silvery-white. *Thorax* dark brownish fuscous in front, posteriorly silvery. *Forewings* dark brownish fuscous, the dorsal space below the fold somewhat silvery; a cuneiform bright yellow-ochreous streak along the termen occupies half the wing-width, and is preceded by an upright, silvery, raised dorsal streak, pointing to a spot of the same colour on the costa; in the yellow space, a little beyond the first, is a round jet-black dot; the costal portion beyond the silver spot is of the dark ground-colour, containing three slender inverted silvery white streaks, the outer one passing through the cilia scarcely above the apex; cilia silvery grey. *Exp. al.* 6 mm. *Hindwings* shining, very pale grey; cilia rosy grey. *Abdomen* brownish fuscous, with paler anal tuft. *Legs* dark brownish fuscous externally, whitish on their inner sides; the hind tibiae with whitish hairs above, the spurs white; the hind tarsi with three white annulations.

*Type* ♂ (65542) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO : TABASCO : Teapa, III. (*H. H. Smith*). Unique.

### 3. *Stilbosis juvenis*, sp. n. (Tab. I. fig. 10.)

*Antennae* blackish, with pale fawn-ochreous annulations. *Palpi* pale steely grey, suffused with blackish toward the apex, but not at the extreme tip. *Head* and *Thorax* bronzy blackish. *Forewings* bronzy blackish, with a large pale fawn-ochreous dorsal patch crossing the fold, and attenuated at its outer and upper extremity in a ridge of raised scales of the same colour, reaching nearly to the middle of the costa, a little beyond which, on the dorsum, is a smaller patch of which the outer half is dark fuscous; the dark space beyond these is somewhat broken by pale fawn-ochreous, of which there is a more distinct band crossing the wing before the apical area, and containing a few raised scales, mixed with fuscous in its lower half; the terminal area is wholly bronzy blackish, with a few raised scales along the base of the almost equally darkened cilia; another strong patch of raised blackish scales precedes the first pale ochreous space, at about one-fourth from the base. *Exp. al.* 12 mm. *Hindwings* bronzy brownish grey; cilia brownish ochreous. *Abdomen* bronzy brownish, tinged with ochreous. *Legs* alternately banded with bronzy blackish and pale ochreous.

*Type* ♀ (66024) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO : GUERRERO : Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

This has much the appearance of *Walshia amorphella* Clms., from which it differs in neuration and in the distribution of the dark and pale colour-patches, which are however so similar in general tone as to remind one very strongly of that species.

#### 4. *Stilbosis amphibola*, sp. n.

*Antennae*, basal joint with single pecten; bronzy brownish, with pale bars above. *Palpi* bronzy brownish, slightly speckled on their outer sides, except towards the apex. *Head* and *Thorax* bronzy brownish, the latter becoming paler, or more steely grey, posteriorly. *Forewings* bronzy brownish, with a slight purplish tinge, a few upstanding scales on the fold at one-sixth; a straight, transverse, bar of raised scales at the tornus; a few of the darker scales at the base of the cilia, around the apex, are also slightly raised; the space below the fold from base to middle is almost entirely shining steely whitish; cilia bronzy grey, with shining steely white tips to some of the shorter scales around the apex. *Exp. al.* 11.5 mm. *Hindwings* steely grey; cilia rather brownish grey. *Abdomen* bronzy, slightly mottled with paler shining scales. *Legs* bronzy brownish, the tarsi pale spotted; the rather hairy tibiae with steely whitish scales above each pair of spurs.

*Type* ♂ (66022) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (66023) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

This species has much the appearance of *Walshia amorphella* Clms., it differs however, not only in neuration, but also in the pattern of its colouring, the pale dorsal space not extending, as in that species, above and beyond the fold, but rather more in the direction of the base; it differs in the same way from *Stilbosis juvenis* Wlsm., which was at first thought to be *Walshia amorphella*.

### HOMALEDRA Busck.

*Type*: *Homaledra heptathalama* Busck (Busck 1900).

HOMALEDRA Busck Pr. US. Nat. Mus. 23 236-8 Pf. 1·10-11 (1900); Dyar Bull. US. Nat. Mus. 52 543 sp. 6169-6169·1 (1902).

#### 1. *Homaledra knabi*, sp. n. (Tab. I. fig. 8.)

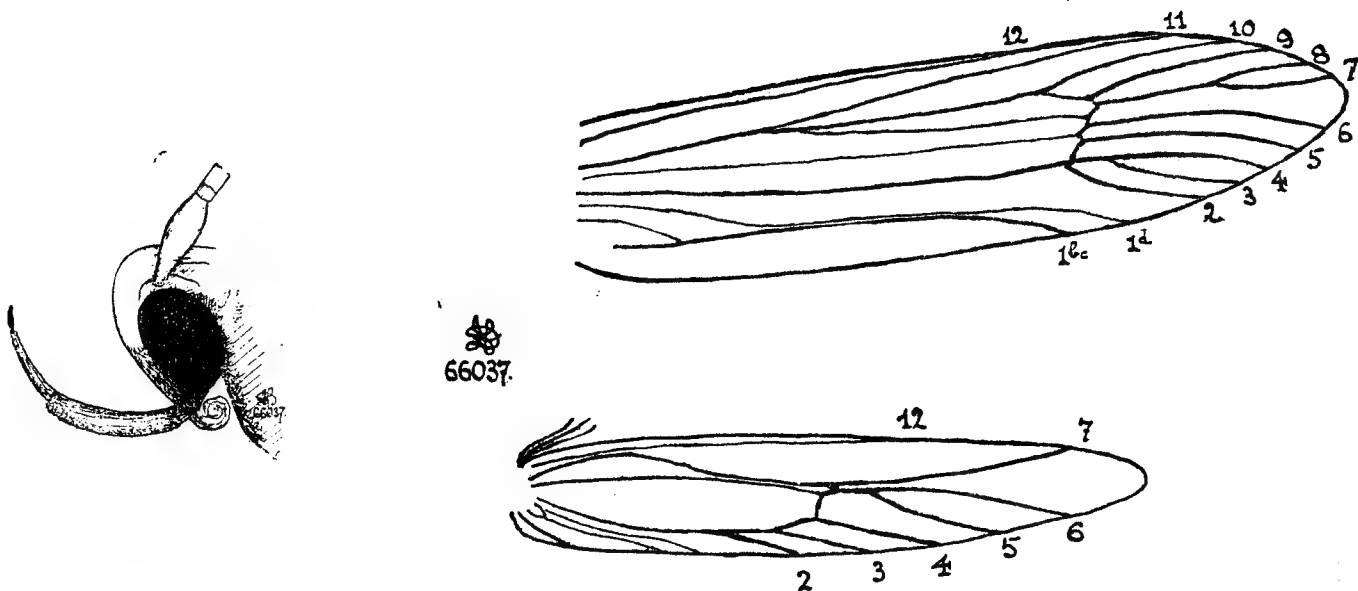
*Antennae* fawn-ochreous. *Palpi* pale fawn-ochreous, whitish on their inner sides; the tuft at the end of the median projecting to the length of the short, suberect, terminal joint, which has two fuscous annulations. *Head* and *Thorax* pale fawn-ochreous. *Forewings* pale fawn-ochreous, minutely dusted with fuscous, more thickly along the dorsum, where it forms a connected, narrow, speckled shade-band from flexus to tornus; a small fuscous spot lies at about the middle of the fold, and another at the end of the cell below the middle; cilia pale fawn-ochreous. *Exp. al.* 24 mm. *Hindwings* rather shining, pale bone-greyish; cilia pale fawn-ochreous. *Abdomen* and *Legs* pale fawn-ochreous, the former slightly tinged with fuscous across the middle.

*Type* ♀ (5972 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: VERA CRUZ: Cordova, V. 1908 (*F. Knab*). Unique.

## HOMOEOPREPES, gen. n.

(ὁμοιοπρεπής = of-like-appearance-with.)

Type: *Homoeoprepes trochiloides* Wlsm.

J. H. Durrant, del.

4. *Homoeoprepes trochiloides* Wlsm. ♀.

*Antennae* (broken—? nearly as long as the wing) basal joint without pecten. *Labial Palpi* long, recurved; median joint somewhat thickened, slightly roughened in front; terminal joint much shorter than median, attenuate. *Maxillary Palpi* obsolete (or broken?). *Haustellum* moderate. *Head* smooth (denuded). *Thorax* smooth. *Forewings* elongate-lanceolate, costa slightly depressed in the middle, apex depressed, bluntly pointed; termen very oblique, corresponding with the contour of the apical depression of the costa; with raised scales: *neuration* 12 veins; 7 and 8 stalked, to costa; 3 and 4 stalked, 2 connate with (3+4); rest separate;  $1^{bc}$  furcate,  $1^d$  separate, but almost anastomosed with  $1^{bc}$  for greater part of its length, diverging basally and distally. *Hindwings* (—1) obtusely lanceolate, cilia 1: *neuration* 8 veins; 5 and 6 stalked, 7 separate; 2—(5+6) separate, remote. *Abdomen* moderate. *Legs* (broken).

Closely allied to *Lophoptilus* Sircom (= *Leucophryne* Chmb.), and similar in appearance, but easily distinguished by the stalking of veins 3 and 4 of the forewings.

1. *Homoeoprepes trochiloides*, sp. n. (Tab. I. fig. 13.)

*Antennae*, *Palpi*, and *Head* pale ochreous. *Thorax* brownish. *Forewings* iridescent purplish, or bluish, grey, smeared with dark ferruginous, which becomes rich chestnut-brown in some lights, especially towards the apex; this dark shading commences at the base of the costa, where it forms an elongate patch of diffused scaling, scarcely separated from a large median blotch commencing near the middle of the base, following the cell almost to its outer extremity and diffused upward to the costa and downward into the middle of the fold; a patch of partly raised chestnut scales lies on the cell at one-third from the base; a few similar scales are in the fold somewhat beyond it, and, at the outer extremity of the cell is a strong patch of raised dull golden scales, mixed with fuscous, whence a rich chestnut streak is produced to the apex, somewhat dilated upward to the costa above it; cilia cupreous. *Exp. al.* 25 mm. *Hindwings* and cilia pale cupreous. *Abdomen* brownish cupreous (somewhat denuded). *Legs* (broken).

*Type* ♀ (66037) Mus. Wlsm. (Godm-Salv. Coll.).

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (H. Rogers). Unique.

The specimen is unfortunately in very poor condition, but it is of so remarkable a form that it seems desirable to indicate its presence as a feature of the Central-American fauna.

## SYNALLAGMA Busck.

Type: *Synallagma busckiella* Engel (Busck 1907).

SYNALLAGMA Busck Ent. News 18 277 (1907).

The Zoological Record (1907 Ind. Gn. 13) wrongly attributes this genus to Engel, despite Mr. Engel's statement (Ent. News 18 276) that "the diagnosis of the new genus *Synallagma* was prepared by Mr. Busck"!

1. *Synallagma busckellum* Engel. (Tab. I. fig. 4.)*Synallagma busckiella* Engel Ent. News 18 278 (1907)<sup>1</sup>.

*Hab.* AMERICA, N-C. United States<sup>1</sup>—PENNSYLVANIA<sup>1</sup>: Pittsburgh, VI-IX<sup>1</sup>; Oak Station<sup>1</sup>. Central America—MEXICO: GUERRERO: Amula 6000 ft., VIII. (*H. H. Smith*).

A single specimen (65997), in poor condition, undoubtedly belongs to the genus *Synallagma* Busck, but the markings are much obliterated and it cannot be identified as *busckellum* with absolute certainty; it shows no character by which it can be separated from the Pittsburgh specimen (33604) figured.

## PAMMECES Z.

Type: *Pammeces albivittella* Z. (Z. 1863).PAMMECES Z. Stett. Ent. Ztg. 24 152-3 Pf. 2 · 11-11<sup>b</sup> (1863).

*Antennae* longer than forewings, simple; basal joint elongate, with pecten. *Labial Palpi* long, slender, recurved; terminal joint acute, longer than median; median joint, distally, with long hairs above and beneath. *Maxillary Palpi* minute. *Haustellum* moderate. *Ocelli* absent. *Head* and *Thorax* smooth. *Forewings* narrow, elongate-hastate, slightly sinuate beneath apex: *neuration* 12 veins; 7 and 8 stalked, to costa; rest separate; cell very long, 4 from its tornus; media from below 6; 1<sup>bc</sup> basally furcate, strongly angulate dorsally at the postflexal impression; 1<sup>d</sup> present. *Hindwings* narrow, lanceolate, cilia 2-3: *neuration* 8 veins; 5 and 6 stalked, 7 separate; rest separate, cell very long. *Abdomen* moderate. *Legs* rather long; hind tibiae with long hairs above.

This genus belongs to the group of *Lophoptilus* Sircom, and *Batrachedra* Stn., having 5 and 6 of the hindwings stalked; it is most nearly allied to *Zaratha* Wkr., which however has smooth palpi, and lacks the antennal pecten.

[The above description is taken from *Pammeces problema* Wlsm. (68986-8, Colombia) which is congeneric with the unique type of *albivittella* Z. (Venezuela).]

1. *Pammeces phlogophora*, sp. n. (Tab. I. fig. 7.)

*Antennae* somewhat longer than the forewings, biserrate towards the apex, basal joint enlarged, with slight pecten beneath; pale fawn, basal joint smeared above with reddish orange. *Palpi* recurved, slender, terminal joint longer than median which is clothed with a long, somewhat triangular, projecting tuft beneath; very pale fawn, with a black spot before the apex of the terminal joint. *Head* reddish orange above, face pale fawn. *Thorax* pale fawn, anteriorly spotted with reddish orange; tegulae yellow. *Forewings* bright canary-yellow, the costa pale shining fawn-colour throughout, the middle of the dorsum and a small tuft near its base purplish fuscous; around the yellow central portion of the wing a

margin of bright reddish orange encloses the cell, and is produced at its upper angle in a narrow streak to the apex where it is reduplicated in the costal cilia; a dash of shining rosy pink terminating in a shining purple grey streak, above which is a black spot, precedes and accompanies the termen beneath the apex; there is also a small black spot at the extreme apex; costal cilia yellowish, terminal cilia pale fawn, with a rosy lustre along their base. *Exp. al.* 14 mm. *Hindwings* shining, semitransparent, pale steel-grey, thickened on their outer half by dark grey lustrous scales beneath; cilia pale fawn. *Abdomen* fawn. *Legs* pale fawn, the hind tibiae with long pale fawn hairs above.

*Type* ♂ (65540) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800-1500 ft. (*G. C. Champion*). Two specimens.

### ZARATHA Wkr.

*Type:* *Zaratha pterodactylella* Wkr. (Wkr. 1864).

ZARATHA Wkr. Cat. Lp. BM. 29 789-90 no. 78 (1864); F. & R. Reise Nov. Zool. Lp. 2 expl. Pf. 140·18, 26 (1875).

*Antennae* longer than the forewings, serrate; basal joint elongate and narrow at the base, without pecten. *Labial Palpi* long, recurved, rising high above the head, smooth; terminal joint acute, longer than the median. *Maxillary Palpi* small, but distinct, bent. *Haustellum* well-developed. *Ocelli* absent. *Head* and *Thorax* smooth. *Forewings* very long and narrow, apex depressed, acuminate: *neuration* 12 veins; 7 and 8 stalked, to costa; rest separate; cell long, 3 from its tornus; media from 6; 1<sup>bc</sup> straight, 1<sup>c</sup> basally subobsolete; 1<sup>d</sup> present. *Hindwings* 1, tapering outwardly to an acute apex; cilia 2: *neuration* 8 veins; 5 and 6 stalked, 7 separate; rest separate, discoidal obsolete between 4 and stalk of (5+6) which is continued to base as media. *Abdomen* very long and slender. *Legs* rather long; hind tibiae hairy above.

Allied to *Pammeces* Z., but differing in the absence of the antennal pecten, in the smooth palpi, in vein 3 of forewings originating at angle, and in the open cell in the hindwings.

#### 1. *Zaratha pterodactylella* Wkr.

*n. syn.* = *niveiventris* F. & R.

*Zaratha pterodactylella* Wkr. Cat. Lep. BM. 29 790 sp. 1 (1864)<sup>1</sup>. *Zaratha ? niveiventris* F. & R. Reise Nov. Zool. Lp. 2 Pf. 140·26 (1875)<sup>2</sup>.

*Antennae* dark bronzy fuscous above, except towards the apex, where about ten or twelve joints are white and serrate, the tip again becoming fuscous; ochreous beneath. *Palpi* pale ochreous; terminal joint longer than median, fuscous along its under side. *Maxillary Palpi* silvery white. *Head* purplish above; face silvery white. *Thorax* bronzy fuscous; white beneath. *Forewings* shining yellowish ochreous, shaded along the dorsum with dark bronzy brown, of which an elongate patch, a little beyond the middle, is rather darker than the remainder of the dorsal shade, this darker colouring extending obliquely backward and nearly reaching the costa before the middle; from the base runs a narrow dark steel-grey streak to the end of the cell, terminated by a dark brownish fuscous transverse spot, a shining pale steel-grey streak running along the margin to the apex from its upper angle, a shorter one reaching the termen from its lower angle; costal cilia shining, pale ochreous; dorsal and terminal cilia bronzy brownish fuscous. *Exp. al.* 14-16 mm. *Hindwings* shining, dark bronzy brown; cilia dark brownish fuscous. *Abdomen* dark brownish fuscous; white beneath. *Legs*, posterior pair dark brownish fuscous above, white beneath; the tibiae hairy, with projecting ochreous scales above the second pair of spurs, these and the terminal three joints of the tarsi silvery white.

*Nt.* ♀ (66010, *Bugaba*) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Atoyac (*Schumann*);



Cordova, I. 1908 (*F. Knab*): TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: San Isidro, 1600 ft. (*G. C. Champion*); Volcan de Atitlan, 2500–3500 ft. (*G. C. Champion*); Las Mercedes, 3000 ft. (*G. C. Champion*)—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft. (*G. C. Champion*); Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). South America—COLOMBIA<sup>2</sup>: Bogota (*Lindig*)<sup>2</sup>—BRAZIL<sup>1</sup>: AMAZONS<sup>1</sup>: Ega (*Bates*)<sup>1</sup>; Santarem, X. 1884 (*J. H. Leech*): ESPIRITU SANTO: 1872 (*Schmidt*): PARANA: Castro, 1896 (*E. D. Jones*).

The series exhibits some variation, in some specimens the costa is darkened towards the base, a small ochreous triangular costal spot, at about one-third, sometimes being conspicuous.

## 2. *Zaratha macrocera* F. & R.

*Zaratha? macrocera* F. & R. Reise Nov. Zool. Lp. 2 Pf. 140·18 (1875)<sup>1</sup>.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft. (*G. C. Champion*). South America—COLOMBIA: Minca, 2000 ft., VI. 1889 (*H. H. Smith*)—BRAZIL<sup>1</sup>: AMAZONS<sup>1</sup>: (*Bates*)<sup>1</sup>—PERU, E.: Rio Perene (*Rosenberg*).

## LOPHOPTILUS Sircom.

=CYPHOPHORA HS.; =PSACAPHORA HS.; =LEUCOPHRYNE Chmb.

Type 1: *Tinea miscella* S-D. (Sircom 1848).

LOPHOPTILUS Sircom Zool. 6 2037 (1848).

1 (Type) *miscella* S-D. (= *staintoni* Sircom).

Stn. NH. Tin. 11 142–3 (1870); Wlsm. & Drnt. Ent. Mo. Mag. 45 155–6 (1909).

Type 2: *Elachista idaei* Z. (HS. 1853).

CYPHOPHORA HS. SB. Schm. Eur. 5 12, 46 no. 77 Pf. 13·7–9 (1853), 211 sp. 597 (1854); Hmn. Schm. Deutsch. Tin. 416 no. 480 sp. 632, Tbl. 8, 53 (1876); Rtti-Splr. Lp-Fn. Baden 257 (1898); Stgr-Rbl. Cat. Lp. Pal. 2 186 no. 395 sp. 3569 (1901).

Type 3: *Tinea schrankella* Hb. (HS. 1853).

PSACAPHORA HS. SB. Schm. Eur. 5 13, 48–9 no. 86 Pf. 13·22–4 (1853).

1 (Type) *schrunkella* Hb. (= *\*linneella* HS. Pf. 13·22; = *locupletella* HS. Pf. 13·24).

2 *linneella* L., HS. Pf. 13·23.

HS. SB. Schm. Eur. 5 215–6 no. 86 sp. 616–20 (1854); Stgr-Rbl. Cat. Lp. Pal. 2 188 no. 404 sp. 3598–9 (1901).

Type 4: *Laverna grandisella* Chmb. (Chmb. 1875).

LEUCOPHRYNE Chmb. Can. Ent. 7 210–11 (1875).

1 (Type) *grandisella* Chmb. (= *tricristatella* Chmb.).

Chmb. Bull. US. GG. Surv. 4 152 (1878); Jr. Cin. Soc. NH. 2 196, 499, tf. 203·39 (1880);

Dyar Bull. US. Nat. Mus. 52 543 sp. 6171 (1902).

*Lophoptilus* will include species hitherto referred to *Laverna* Crt. (= *\*Mompha* HS.),

but differing in having 5 and 6 of the hindwings stalked, 2-4, and 7, separate (*Laverna* has 2-7 separate), and the basal joint of the antenna without pecten. Both genera have 7 and 8 stalked in the forewings, 7 to costa, rest separate.

### 1. *Lophoptilus eloisellus* Clms.

(=*magnatella* Z.; =*lyonetiella* Chmb.<sup>4</sup>; =*oenotheraeella* Chmb.<sup>6</sup>)<sup>10</sup>.

*Laverna eloisella* Clms. Pr. Ac. Nat-Sc. Phil. 12 171 (1860)<sup>1</sup>; Clms-Stn. Tin. N-Am. pp. xiii, 131-2 (1872)<sup>2</sup>. *Phyllocnistis magnatella* Z. Verh. ZB. Ges. Wien 23: 1873 Abh. 315-6 sp. 2 Pf. 4-43 (1873)<sup>3</sup>. *Laverna lyonetiella* Chmb. Can. Ent. 7 30, 51 (1875)<sup>4</sup>. *Laverna oenotheraeella* Chmb. Can. Ent. 7 30-2 (1875)<sup>5</sup>. *Laverna magnatella* Chmb. Can. Ent. 9 73-4 (1877)<sup>6</sup>. *Laverna eloisella* Chmb. Can. Ent. 9 74 (1877)<sup>7</sup>. *Laverna eloisella* Chmb. Bull. US. GG. Surv. 4 151 (1878)<sup>8</sup>. *Laverna? magnatella* Chmb. Bull. US. GG. Surv. 4 113, 152 (1878)<sup>9</sup>. *Laverna? eloisella* Wlsm. Tr. Am. Ent. Soc. 10 195 (1882)<sup>10</sup>. *Laverna oenotherella* Hgn. & Frey Pap. 4 154 (1884)<sup>11</sup>; Riley, Smith's List Lp. Bor-Am. 106 sp. 5727 (1891)<sup>12</sup>. *Mompha eloisella* Dyar Bull. US. Nat. Mus. 52 542 sp. 6157 (1902)<sup>13</sup>. *Laverna eloisella* Busck Pr. Ent. Soc. Wash. 5 203 (1903)<sup>14</sup>. *Mompha eloisella* Busck Pr. US. Nat. Mus. 30 731 (1906)<sup>15</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-15</sup>—MAINE<sup>10</sup>: Orono, ⊕ *Oenothera*<sup>10</sup>—MASSACHUSETTS<sup>3</sup>: Beverley, 8, VII. 1868<sup>3</sup>—PENNSYLVANIA<sup>1-2, 13-14</sup>—MARYLAND: Plummer's Id., VII. 1903 (*Busck*); Hyattsville, VIII. 1906 (*Busck*)—NORTH CAROLINA (*Morrison*, 1884)—MISSOURI<sup>5, 8, 10</sup>: St. Louis, ⊕ stems *Oenothera missouriensis*, VIII—IX<sup>5, 8-9</sup>—COLORADO: LARRIMER CO.: Loveland, VI—VIII. 1891 (*W. G. Smith*)—OREGON<sup>10</sup>: JOSEPHINE CO.<sup>10</sup>: Rogue River, 7. V. 1872 (*Wlsm.*)<sup>10</sup>—TEXAS<sup>4-5, 9</sup>: BOSQUE CO.<sup>4-5, 9</sup>: 7.VI—21.VII. 1876 (*Belfrage*): S. TEXAS<sup>15</sup>: Brownsville<sup>15</sup>. Central America—N.W. MEXICO: SONORA: 1883 (*H. K. Morrison*).

Hagen [Pap. 4 154 (1884)] wrote "*Laverna magnatella*, Zell.-Chb. 2 locality? It is different from *oenotheriella*." This note really means that *Laverna grandisella* Chmb. (= *\*magnatella*, Mus. Cambr.) is distinct from *Laverna eloisella* Clms. (= *oenotherella* Chmb., Mus. Cambr.), for Busck [Pr. US. Nat. Mus. 27 767 (1904)] points out that "Chambers' type of *Laverna grandisella* (erroneously labeled by himself, *Laverna magnatella*), is in the Museum of Comparative Zoology, Cambridge, Massachusetts."

### WALSHIA Clms.

Type 1: *Walshia amorphella* Clms. (Clms. 1864).

WALSHIA Clms. Pr. Ent. Soc. Phil. 2 418-9 (1864): Clms-Stn. Tin. N-Am. 240-1 (1872); Dyar Bull. US. Nat. Mus. 52 544 sp. 6179 (1902); Wlsm. & Drnt. Ent. Mo. Mag. 45 156-7 (1909).

Type 2: *Elachista rhamniella* Z. (Hnmn. 1876).

\**MOMPHA* (nec Hb.) Hnmn. Schm. Deutsch. Tin. 422 no. 484 sp. 643, Tbl. 8, 54 (1876); Rtti-Splr. Lp-Fn. Baden 256 sp. 636 (1898).



### 1. *Walshia calcarata*, sp. n. (Tab. I. fig. 15.)

*Antennae* brownish, the last eleven or twelve joints pure white. *Palpi* with the median joint enlarged by projecting scales above, and more especially beneath, giving it a triangular form; terminal joint stout, somewhat clothed beneath nearly to the apex; white, dusted with brown, except at the extremity of each joint. *Head* white. *Thorax* greyish fuscous above, whitish behind; tegulae whitish. *Forewings* brown and whitish, mixed in about equal proportions, with a lilac gloss about the paler parts, especially below the fold; a stout, square-ended, tuft of brownish ochreous raised scales below the fold at one-third of its length, a ridge of raised scales of the same colour, but delicately striated with brown, crosses the middle of the wing from costa to dorsum; another raised patch, somewhat tinged with fuscous, occurring at the end of the cell, is succeeded by a pale transverse band with lilac reflections, the central fascia being also preceded and followed by the same whitish ground-colour; three fuscous dots occur at the base of the brownish ochreous cilia below the apex, the tornal cilia tending to greyish. *Exp. al.* 13 mm. *Hindwings* cinereous, dusted with pale brownish; cilia cinereous, tinged with ochreous towards the apex. *Abdomen* (missing). *Legs* brownish, the hind tibiae obliquely banded with white at the base of the first pair of spurs; second pair of spurs densely clothed with a triangular tuft of white scales above; tarsi slightly annulate with white.

*Type* ♂ (65539) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

The clothing of the spurs of the hind tibiae distinguishes *calcarella* from *amorphella* Clms., and *detracta* Wlsm.

### 2. *Walshia detracta*, sp. n. (Tab. I. fig. 14.)

*Antennae* cinereous, annulate with brownish fuscous; the elongate basal joint fuscous above, pale beneath. *Palpi* recurved to the vertex, somewhat coarsely clothed nearly to the apex, terminal joint longer than median; pale cinereous, shaded externally with fuscous nearly to the end of the median joint and above the middle of the terminal joint. *Head* greyish fuscous above, face steel-whitish. *Thorax* dark greyish fuscous. *Forewings* dark greyish fuscous to the end of the basal third, with a large concurrent pattern of raised scales, tinged with chestnut-brown beyond the base, especially about the middle of the costa and at the apex, with numerous tufts of raised scales distributed nearly to the apex; cilia brownish cinereous, greyish fuscous at the extreme apex. *Exp. al.* 15 mm. *Hindwings* greyish brown; cilia 6, brownish cinereous. *Legs* greyish fuscous, with whitish bands at the base of each pair of spurs.

*Type* ♀ (65538) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### LAVERNA Crt.

=† *LARUNA* Chmb., *laps. cal.*; =\**MOMPHA* (Hb.) HS., *nec* Stph.; = *WILSONIA* Clms.

*Type* 1: *Laverna ochraceella* Crt. (Crt. 1839).

LAVERNA Crt. Br. Ent. **16** expl. Pl. **735** (1839); Stn. List Br. An. BM. XVI. Lp. **3** 137-9 (1854): Ins. Br. Lp-Tin. 225, 235-40 Pf. **7**·8<sup>a-c</sup> (1854); Frey Tin-Pter. Schweiz 276-83 (1856): Lin. Ent. **14** 180-205 (1860); Wkr. Cat. Lp. BM. **30** 882-5 (1864); Stn. NH. Tin. **11** 126-49 Pl. **4-6** (1870); Stgr-Wk. Cat. Lp. Eur. 319 sp. 2569-88 (1871); Clms-Stn. Tin. N-Am. 130-1 (1872); [†*LARUNA* Chmb. Can. Ent. **5** 229 (1873): **6** 49, 73 (1874)]; Hnmn. Schm. Deutsch. Tin. 416-20, Tbl. 8, 53-4 (1876); Z. Hor. Soc. Ent. Ross. **13** 420-7 (1877); Chmb. Bull. US. GG. Surv. **4** 151-2 (1878); Snln. Vlind. Ned. Micr. 422, 852-60 Pf. **12**·419-22 (1882); Wlsm. Tr. Ent. Soc. Lond. **1891** 117-8 Pf. **5-6**·54-5 (1891); Riley, Smith's List Lp.

Bor-Am. 106 sp. 5719-38 (1891); Rtti-Splr. Lp-Fn. Baden 256-7 (1898); *etc.*; Wlsm. & Drnt. Ent. Mo. Mag. 45 173-4 (1909).

Type 2: *Tinea conturbatella* Hb. (HS. 1853).

MOMPHA (Hb.) HS. SB. Schm. Eur. 5 12, 46 no. 75 Pf. 13 4-6 (1853), 208-10 sp. 586-93 (1854); Meyr. HB. Br. Lp. 640, 678-82 tf. 679 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 186-7 sp. 3576-91 (1901); Dyar Bull. US. Nat. Mus. 52 541-3 sp. 6148-68 (1902).

Type 3: *Wilsonia brevivittella* Clms. (Clms. 1864).

WILSONIA Clms. Pr. Ent. Soc. Phil. 2 428-9 (1864); Clms-Stn. Tin. N-Am. 253-4 (1872); Chmb. Bull. US. GG. Surv. 4 166 (1878); Busck Pr. Ent. Soc. Wash. 5 218 (1903).

*Laverna* Crt. is here used for species with *Hindwings* 8 veins, all separate: *Forewings* 12 veins, 7 and 8 stalked, 7 to costa, rest separate: *Antennae*, basicerite with well-developed pecten.

### 1. *Laverna farinacea*, sp. n.

*Antennae* mealy grey, annulate with fuscous. *Palpi* mealy grey, the median joint somewhat expanded at the apex; terminal joint about as long as the median, with three fuscous annulations. *Head* and *Thorax* mealy greyish; face whiter. *Forewings* mealy grey, with transverse reddish cupreous bands in which are some slightly raised black scales; the first band, commencing close to the base of the costa, has its inner edge marked by black scales, and runs obliquely outward to the dorsum, its outer side dilated on the cell and ill-defined; the second, parallel with it, terminates in a spot of raised scales on the dorsum, its outer side ill-defined and nearly coalescing with a small triangular costal patch of the same colour beyond the middle; a third band, almost parallel with the termen, runs inward to the dorsum from the costal cilia, and is interrupted by a minute black streak beyond the end of the cell; a dark line follows the margin around the apex and termen, giving an angular appearance to the wing, and two slender dark lines run through the mealy terminal cilia; the dorsal cilia inclining to cupreous. *Exp. al.* 9 mm. *Hindwings* and cilia pale greyish cupreous. *Abdomen* cinereous. *Legs* whitish cinereous, the tibiae and tarsi banded externally with blackish.

Type ♀ (66043); ♂ (66042) Mus. Wlsm. (*Godm-Salv. Coll.*). [PTT. (66044-5) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Five specimens.

### 2. *Laverna obsessa*, sp. n. (Tab. I. fig. 16.)

*Antennae* ( $\frac{2}{3}$ ) simple; fuscous. *Palpi* evenly recurved, slender; pale cinereous, the terminal joint as long as the median, with a fuscous spot beneath, its apex also fuscous; median joint fuscous externally nearly to its apex. *Head* bronzy fuscous. *Thorax* bronzy fuscous anteriorly; posteriorly pale brassy yellowish. *Forewings* narrow, elongate; shining, brassy brownish, with a dark purplish grey patch on the costa, from the middle to the commencement of the cilia, containing at its lower edge a bright reddish cupreous spot in which are some slightly raised scales, a similar spot lying near the end of the fold below and before it; there is also a reddish cupreous patch, near the base of the costa, reaching to the fold and somewhat produced outward; the apex and termen are much shaded with dark fuscous, an inverted pale brassy yellowish streak separating the apical from the costal shade and running to the dorsum at the outer end of the fold. *Exp. al.* 9 mm. *Hindwings* and cilia pale bronzy fuscous. *Abdomen* and *Legs* (missing).

Type ♂ (66040) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 3. *Laverna pernota*, sp. n. (Tab. I. fig. 17.)

*Antennae* fuscous. *Palpi* recurved, the terminal joint longer than the median, densely but smoothly clothed, having thus a thickened appearance; dark fawn-brown, with indistinct paler speckling. *Head* shining, purplish fuscous, covered with large flat scales. *Thorax* dark purplish fuscous, with a triangular whitish ochreous patch posteriorly. *Forewings* pale fawn-ochreous, with a small dark purplish fuscous shoulder-patch at the base of the costa; some dark fawn-brown speckling, especially on the outer half of the wing, tending to form dark shading along the margins, with an indication of marginal spots around the apex and termen, through confluence of the otherwise more scattered dark scales; there is a black dot at the end of the cell, another in the fold beyond its middle, and the whole wing-surface in certain lights exhibits a pearly lilac lustre; cilia dark brownish; underside dark purplish fuscous, becoming brassy ochreous around the base of the cilia towards the apex. *Exp. al.* 14 mm. *Hindwings* narrow, acuminate; shining, bronzy brown; cilia dark brown. *Abdomen* dark fawn-brown. *Legs* dark fawn-brown, paler on their inner sides.

*Type* ♀ (66041) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 4. *Laverna agonistes*, sp. n. (Tab. I. fig. 12.)

*Antennae* pale ochreous, narrowly annulate with fuscous; basal joint with short pecten. *Palpi* with the terminal and median joints of about equal length, the latter somewhat roughened by projecting scales beneath towards its apex; terminal stout, but sharply acuminate; pale ochreous, with pale fuscous sprinkling externally. *Head* and *Thorax* pale ochreous. *Forewings* narrow, elongate, with depressed acuminate apex; pale ochreous, mottled with pale and dark olivaceous brown and a few black scales; with three or four large tufts of raised pale ochreous scales lying along the line of the fold, and one between the fold and the dorsum near the base; the wing-pattern is so confused as to be scarcely capable of description, its prominent feature being a dark brown median shade above the fold, broken into outwardly angulate or oblique streaks beyond the middle, accompanied by two or three small dots of white scales on and beyond the outer half of the cell, while a few jet-black scales are placed along the upper edges of the two outer raised scale-tufts, as well as around the apex and termen and in the speckled whitish cinereous cilia; there is a patch of shining rosy pink at the end of the cell, another before it on the cell, and an elongate patch of the same along the middle of the costa; costal cilia shining pale ochreous, dorsal cilia iridescent greyish fuscous. *Exp. al.* 16 mm. *Hindwings* (—1) tapering, acute; iridescent bronzy brownish grey; cilia iridescent greyish fuscous. *Abdomen* ochreous, mixed with brownish grey, with pale shining steel-grey transverse bands; pale ochreous beneath. *Legs* greyish brown, indistinctly banded with whitish ochreous.

*Type* ♂ (66025) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* GUATEMALA: Totonicapam, 8500–10,500 ft. (*G. C. Champion*). Unique.

### [*Laverna gleditschiella* Chmb.

*Laverna?* (*Anybia?*) *gleditschiaella* Chmb. Can. Ent. 8 135–7 (1876)<sup>1</sup>. *Laverna gleditschiaella* Chmb. Can. Ent. 9 232–4 (1877)<sup>2</sup>; *Mompha gleditschiaella* Dyar Bull. US. Nat. Mus. 52 542 sp. 6159 (1902)<sup>3</sup>. *Hab.* United States—KENTUCKY<sup>1–3</sup>.

Writing under the heading “Insects feeding on *Gleditschia*” (Can. Ent. 9 231–5) Chambers remarked (*l. c.* 234) “I have been informed that thorns of various species of *Acacia* (in a large sense) in Texas, New Mexico, and Arizona, are perforated by insect borings similar to those of *Laverna gleditschiaella* in the Honey Locust, but I

have not been able to procure specimens of the insect architect. Prof. Sumichrast mentions similar borings in Acacias in Mexico (referred to in a volume of the *American Naturalist*—I write from recollection and cannot refer to the volume or page). These, however, like those of which Mr. Belt gives such an entertaining account in 'The Naturalist in Nicaragua,' were tenanted by ants," *etc.*]

### PERIMEDE Chmb.

Type: *Perimede errantella* Chmb. (Chmb. 1874).

PERIMEDE Chmb. Can. Ent. 6 51-2 (1874): 9 147 (1877): 11 9 (1879): Jr. Cin. Soc. NH. 2 196, 199, tf. 203 · 35 (1880).

#### 1. *Perimede catapasta*, sp. n.

*Antennae* brownish grey. *Palpi* slightly recurved, the median and terminal joints about equal in length and thickness, smooth; shining, brownish grey. *Head* shining, brownish grey. *Thorax* brownish grey. *Forewings* dull brownish grey, with a faint indication of a spot in the middle of the fold, a similar dark spot on the disc a little beyond it, and a third, scarcely visible, at the end of the cell; a small whitish costal spot before the apex is followed by a small black spot at the apex, where is also a dark shade-line running through the brownish cinereous cilia; underside with a blackish spot at the apex and one or two terminal dots. *Exp. al.* 13 mm. *Hindwings* narrower than the forewings; dull pale stone-ochreous on their basal half, where they are sprinkled along the costa and across the middle with numerous elongate blackish scales, becoming brownish grey towards the apex; cilia pale brownish cinereous; underside with a blackish spot at the apex, and one or two terminal dots. *Abdomen* pale stone-ochreous at the base and about the anal segments, with a broad blackish band before the middle, and alternate brownish and pale cinereous bands behind it. *Legs* pale cinereous, the tibiae shaded with brownish grey externally, the tarsal joints banded with the same.

Type ♂ (66038) Mus. Wlsm. (*Godm-Salv. Coll.*). [PT. (66039) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

## Fam. 2. GELECHIADAE.

### SITOTROGA Hnmn.

Type: *Alucita cerealella* Olvr. (Hnmn. 1870).

SITOTROGA Hnmn. Schm. Deutsch. Tin. 189, 287 no. 428 sp. 426 (1870), Tbl. 5, 41 (1876); Stn. Ent. Mo. Mag. 7 169 (1871); Meyr. HB. Br. Lp. 569, 571 no. 2 (1895); Busck Pr. US. Nat. Mus. 25, 772, 781-2 Pf. 28 · 3 (1903); Meyr. Pr. Lin. Soc. NSW. 29 257, 285-6 no. 6 (1904).

#### 1. *Sitotroga cerealella* Olvr.

= *hordei* (Bkmn.) Kby.<sup>6,9</sup>; = *pyrophagella* Kllr.<sup>8</sup>; = *melanarthra* Lwr.<sup>15</sup>

*Alucita cerealella* Olvr. Enc. Méth. IV. (Ins. 1) 117, 121 no. 15 (1789)<sup>1</sup>. [*Phaluena hordei* Bkmn. Grund. Teutsch-Landswirths ed. 4, 589 (1790); (no. 9, 149 *teste* Prout) Sherborn Ind. An. 467]<sup>2</sup>. *Tinea hordei* Kby. Intr. Ent. 1 172-3 (1815)<sup>3</sup>. *Butalis cerealella* Crt. Jr. Roy. Agr. Soc. Engl. 7 84-9 (1846)<sup>4</sup>; Farm Ins. 310-15 (1860)<sup>5</sup>. *Anacamptis* (*Butalis*) *cerealella* Harris Treat. Ins. 392-402 (1852)<sup>6</sup>. *Tinea pyrophagella* Kllr. NG. Schäd. Ins. II. 383 Pf. 81 · 7-7<sup>c</sup> (1853)<sup>7</sup>. *Tinea* (*Gelechia*) *pyrophagella* Kllr. Verh. ZB. Ver. Wien 4 SB. 6-9

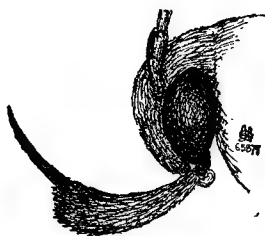
(1854)<sup>8</sup>. *Gelechia cerealella* Stn. List Br. An. BM. XVI. Lp. 3 83 no. 85 (1854)<sup>9</sup>. *Sitotroga cerealella* Hnmn. Schm. Deutsch. Tin. 287 no. 426 (1870)<sup>10</sup>. *Gelechia melanarthra* Lwr. Pr. Lin. Soc. NSW. 25 416-7 (1900)<sup>11</sup>. *Sitotroga cerealella* Stgr-Rbl. Cat. Lp. Pal. 2 157 sp. 2902 (1901)<sup>12</sup>; Busck Bull. US. Nat. Mus. 52 496 sp. 5552 (1902)<sup>13</sup>; Pr. US. Nat. Mus. 25 782 Pf. 28·3 (1903)<sup>14</sup>; Meyr. Pr. Lin. Soc. NSW. 29 286 sp. 50 (1904)<sup>15</sup>; Jr. Bomb. NH. Soc. 16 591 (1905)<sup>16</sup>; Wlsm. Pr. Z. Soc. Lond. 1907 928 sp. 22 (1908)<sup>17</sup>; etc.

*Hab.* EUROPE<sup>(1-10, 12-15, 17)</sup>. ASIA<sup>(16-17)</sup>. AUSTRALIA<sup>(11, 15, 17)</sup>. AFRICA—CAPE COLONY: TRANSKEI: Umtala, 1890 (*F. Barrett*, 9401)—MASHONALAND: Salisbury, 22-7. I. 1895 (*R. Coryndon*, 6225)—CANARIES<sup>(12, 17)</sup>—MADEIRAS<sup>(12, 17)</sup>. AMERICA, N-C. North America<sup>(6, 12-15, 17)</sup>. Central America—MEXICO: VERA CRUZ: Cordova, XII. 1907 (*F. Knab*): GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*): DURANGO: Ciudad, 8100 ft. (*Forrer*): OAXACA: Salina Cruz (*W. Schaus*)—⊕ stored grain, maize, wheat, rice, etc.

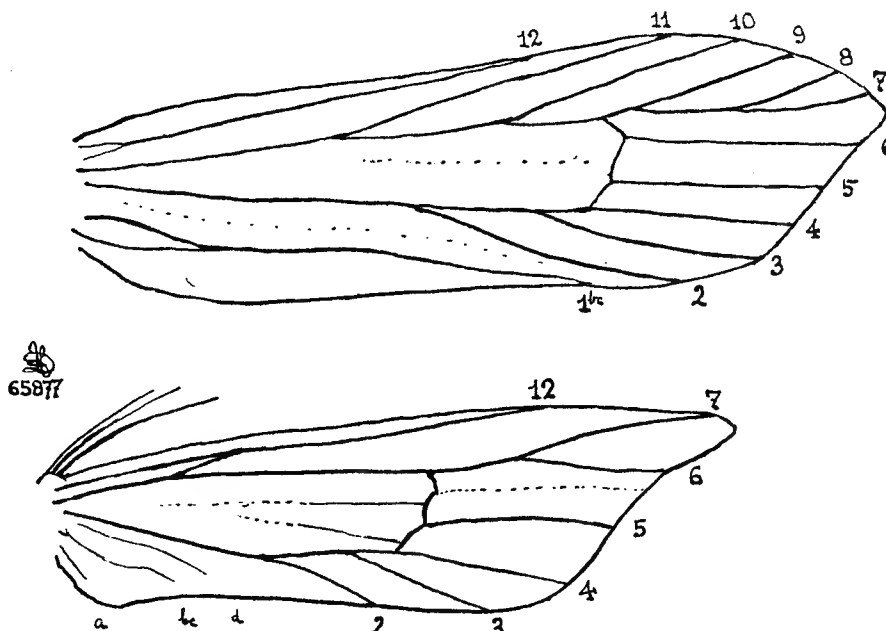
## CATALEXIS, gen. n.

(κατάλεξις = a choosing.)

Type: *Catalexis tapinota* Wlsm. (Tab. I. fig. 18.)



J. H. Durrant, del.



5. *Catalexis tapinota* Wlsm. ♀.

*Antennae* (—1), slightly serrate; basal joint without pecten. *Labial Palpi* recurved, terminal joint shorter than median; median joint without brush-like scales beneath. *Maxillary Palpi* rudimentary. *Haustellum* present. *Head* and *Thorax* smooth. *Forewings*, costa straight, or slightly depressed beyond middle, apex obtusely depressed, termen oblique, dorsum nearly parallel with costa, but slightly narrowing towards base: *neuration* 12 veins; 7 and 8 stalked, 7 to costa; 9 out of stalk of 7 + 8; 2-6 separate. *Hindwings* 1, costa straight, apex acuminate, scarcely depressed, termen very slightly sinuate, oblique, tornus pronounced, dorsum very slightly rounded, almost parallel with costa: *neuration* 8 veins; 5 cubital, 2-5 remote; 6 and 7 stalked. *Abdomen* normal. *Legs* smooth.

Perhaps allied to *Logisis* Wlsm., but differing in the form of the palpi, and in the stalking of HW: 6-7. It differs from *Brachmia* Hb. in FW: 2-3 and HW: 3-4 being separate, not stalked; from *Acanthophila* Hnmn. in FW: 7-8 not being coincident; and from *Stomopteryx* Hnmn. in having FW: 9 out of stalk of 7 + 8.

dd 2

1. *Catalexis tapinota*, sp. n. (Tab. I. fig. 18.)

*Antennae* silvery whitish, shaded with pale fawn-brown towards the base. *Palpi* whitish ochreous, whiter on their inner sides, unspotted. *Head* shining whitish ochreous, with some iridescent steely bluish scales above. *Thorax* steely grey, the tegulae ochreous. *Forewings* fawn-brownish, shaded with dark fuscous (almost black), a very narrow streak of this along the base of the costa to one-fifth, an elongate patch from the base of the dorsum below the fold, extending nearly to the dorsal cilia; above it a shorter cloud-like patch on the cell commencing before and extending a little beyond the middle of the wing; the whole apical fourth is overlaid with dark fuscous, the anterior margin of this dark patch lying almost parallel to the termen, but somewhat attenuated to the apex, a few fawn-brown scales in this patch opposite to the termen; cilia pale brownish ochreous, shaded with fuscous about the tornus. *Exp. al.* 12 mm. *Hindwings* dark fuscous, with some brownish ochreous scales intermixed along the costa and dorsum; cilia dark fuscous. *Abdomen* fawn-brownish, shaded with fuscous. *Legs* whitish ochreous, unspotted; anterior and median legs somewhat shaded above with fuscous.

*Type* ♀ (65877) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* GUATEMALA: VERA PAZ: Panima (*G. C. Champion*). Unique.

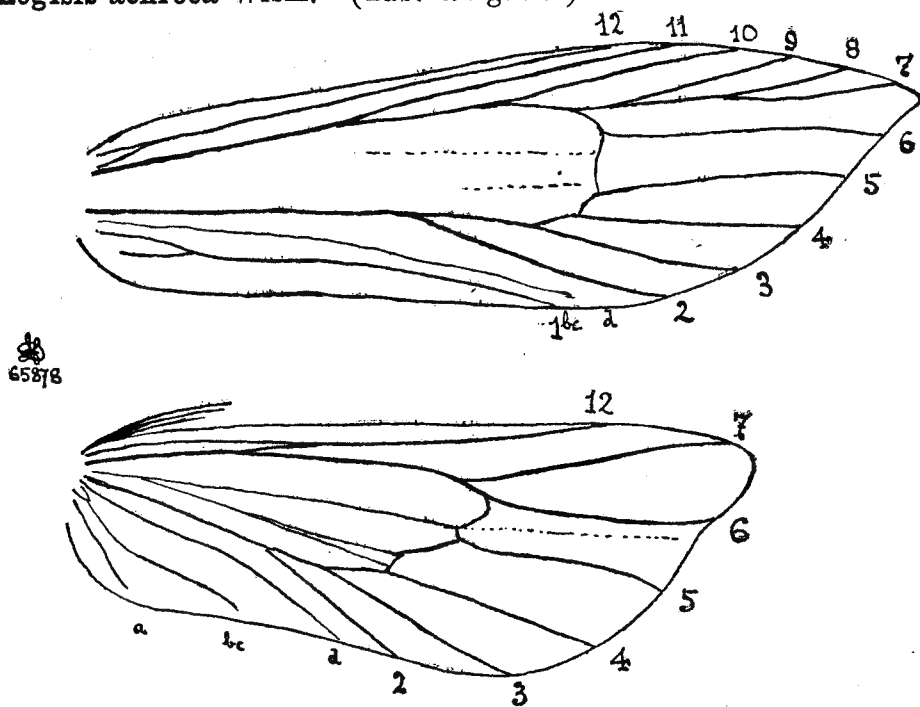
## LOGISIS, gen. n.

(λόγισις = reason.)

*Type*: *Logisis achroea* Wlsm. (Tab. I. fig. 19.)



J. H. Durrant, del.



6. *Logisis achroea* Wlsm. ♀.

*Antennae* (♀)  $\frac{2}{3}$ , simple, slightly dentate towards apex; basal joint without pecten. *Labial Palpi* as long as the head and thorax, projecting; median joint straight, with long upstanding scales above, these higher towards the base, but combining with others at the apex, from the lower side, to form a projection beyond the base of the smooth, slender, upstanding terminal joint. *Maxillary Palpi* very short. *Hauvellum* scaled. *Head* and *Thorax* smooth, with a metathoracic tuft on either side posteriorly. *Forewings* slightly convex on their basal half, straightened beyond, the apex moderately depressed, termen oblique, not sinuate: *neuration* 12 veins; 9 out of stalk of 7 and 8, 7 to costa; 2-6 separate, 2 remote from 3. *Hindwings* somewhat narrowed towards base, widening outwardly, trapezoidal; costa straight, apex obtuse, termen subsinuate, thence rounded, dorsum receding; with a strong tuft of hairs above at the base of vein 1<sup>a</sup>; cilia very long, almost as long as width of wing towards base: *neuration* 8 veins; 3 and 4 remote; 5 straight, approximate to 6; 6 and 7 separate, but approximating; radius connected to subcosta by cross-vein. *Abdomen* long, smooth. *Legs* (hind legs missing, probably long).

The genera *Logisis* and *Catalexis* have a peculiar form, and are perhaps characteristic of tropical America. Their true affinities in the absence of described con



necting forms is somewhat obscure, but, according to the scheme of neurulation, relationship should be sought among the derivatives of *Aristotelia* Hb.

### 1. *Logisis achroea*, sp. n. (Tab. I. fig. 19.)

*Antennae* pale ochreous. *Palpi* very pale ochreous, the median joint shaded with fawn-brown. *Head* and *Thorax* shining, pale ochreous. *Forewings* shining, very pale ochreous, somewhat shaded along the cell, on the fold, and along the dorsum with fawn-brown; a brown spot below the costa near the base, and a narrow brown costal shade at the extreme base; cilia pale ochreous. *Exp. al.* 40 mm. *Hindwings* shining, straw-grey; cilia very pale ochreous. *Abdomen* fawn-brown, mixed with pale ochreous. *Legs* (missing).

*Type* ♀ (65878) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*). Unique.

The specimen is in poor condition, but representing a distinct and remarkable form has been thought worthy of description.

## MEGACRASPEDUS Z.

=AUTONEDA Busck (=§ *NEDA* Chmb.).

*Type 1*: *Ypsolophus* (*Megacraspedus*) *dolosellus* Z. (HS. 1853).

*YPSOLOPHUS* F. (C.) *MEGACRASPEDUS* Z. *Isis* **32** 189–90 sp. 15–16 (1839). *MEGACRASPEDUS* HS. *SB. Schm. Eur.* **5** 11, 43 no. 65 Pf. **12** 43–4 (1853), 157 sp. 392–6 (1854); *Hnmn. Schm. Deutsch. Tin.* 348–50 no. 451 sp. 530–4 (1874), Tbl. 1, 48 (1876); *Stgr-Wk. Cat. Lp. Eur.* 303 no. 231 sp. 2165–73 (1871); *Meyr. Tr. NZ. Inst.* **18** 162–3 (1886); *Wlsm. Tr. Ent. Soc. Lond.* **1891** 109 Pf. **5** 47 (1891); *Ent. Rec.* **9** 140 (1897); *Stgr-Rbl. Cat. Lp. Pal.* **2** 161 no. 341 sp. 3001–11 (1901); *Wlsm. Ent. Mo. Mag.* **39** 266 (1903); *Meyr. Pr. Lin. Soc. NSW.* **29** 257, 272–83 no. 4 sp. 26–46 (1904).

*Type 2*: *Neda plutella* Chmb. (Chmb. 1874; Busck 1902).

*AUTONEDA* Busck.=§ *NEDA* Chmb. *Can. Ent.* **6** 243–4 (1874); *Bull. US. GG. Surv.* **4** 157 (1878); *Jr. Cin. Soc. NH.* **2** 198 tf. 203 · 20 (1880). *AUTONEDA* Busck *Bull. US. Nat. Mus.* **52** 496 sp. 5553 (1902); *Pr. US. Nat. Mus.* **25** 773, 782 Pf. **28** 4 (1903).

### 1. *Megacraspedus exilis*, sp. n. (Tab. I. fig. 20.)

*Antennae* dark bronzy brown. *Palpi* white, the posterior two-thirds of the long triangular tuft on median joint dark bronzy brown; underside of basal joint dark brown at apex. *Head* and median portion of *Thorax* white, the sides and tegulae dark brown. *Forewings* white, profusely irrorated with dark bronzy brown scaling, through which runs a longitudinal blackish median streak from base to apex, which, except for a slight step upward about the end of the cell, is very nearly straight throughout; the brown dusting is much condensed along its upper edge on the basal half, and there is a small detached blackish subcostal spot at one-third from the base; the costa is very narrowly, and the dorsum narrowly, pure white; cilia white, with a broken line of blackish scales along their base, and another before their middle, the black median streak running through them at the extreme apex. *Exp. al.* 12 mm. *Hindwings* shining, very pale bluish grey, cilia pale ochreous. *Abdomen* and *Legs* brownish grey, the hairs on the upper sides of the tibiae whitish.

*Type* ♀ (65759) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

Exceedingly near *plutella* Chmb., but differing in its larger size, in the white thorax, and in the more pronounced detached costal spot.

## ARISTOTELIA Hb.

= CHRYSOPORA Clms. (= § *NOMIA* Clms.) ; = NANNODIA Hnmn. ; = § *ERGATIS* Hnmn. ; = XYSTOPHORA Hnmn-Wk. (= § *DORYPHORA* Hnmn.) ; = MONOCHROA Hnmn. ; = § *LAMPROTES* Hnmn. ; = EUCATOPTUS Wlsm.

Type 1 : *Tinea decurtella* Hb. Pf. 45 · 311 (Hb. 1826).

ARISTOTELIA Hb. Verz. Schm. 424 sp. 4133 (1826) ; Wlsm. Ent. Mo. Mag. **31** 42 (1895) ; Meyr. HB. Br. Lp. 569, 572-7 no. 4 sp. 1-21 ff. 572 (1895) ; Wlsm. Pr. Z. Soc. Lond. **1897** 63-8 no. 10 sp. 21-32 (1897) ; Busck Bull. US. Nat. Mus. **52** 498-9 sp. 5575-91 (1902) : Pr. US. Nat. Mus. **25** 773, 794-804 Pf. **29** · 11 (1903) : **27** 755-7 (1904) : **30** 724-5 (1906) : Pr. Ent. Soc. Wash. **11** 87 (1909) ; Meyr. Pr. Lin. Soc. NSW. **29** 257, 286-92 no. 7 sp. 51-60 (1904) : Jr. Bomb. NH. Soc. **17** 138 (1906) : **18** 437-9 (1908) : Pr. Z. Soc. Lond. **1908** 724 (1908) : Ann. S-Afr. Mus. **5** 369-70 (1909) ; Wlsm. Fn. Haw. **1** 478-82, 744 no. 5 sp. 11-19 Pf. **13** · 17-25 (1907) : Pr. Z. Soc. Lond. **1907** 930-1 no. 14 sp. 25-6 (1908).

Type 2 : *Nomia lingulacella* Clms. (Clms. 1860).

CHRYSOPORA Clms. = § *NOMIA* Clms. Pr. Ac. Nat. Sc. Phil. **12** 167-8 (1860) : Clms-Stn. Tin. N-Am. 123-4 (1872). CHRYSOPORA Clms. (nn.) Pr. Ac. Nat. Sc. Phil. **12** 362 (1860) : Clms-Stn. Tin. N-Am. 123, 158 (1872) ; Wlsm. Ent. Mo. Mag. **31** 42 (1895) ; Stgr-Rbl. Cat. Lp. Pal. **2** 156 no. 319 sp. 2894-7 (1901) ; Busck Bull. US. Nat. Mus. **52** 497-8 sp. 5572-3 (1902) : Pr. US. Nat. Mus. **25** 773, 792-3 Pf. **29** · 9 (1903) ; Wlsm. Pr. Z. Soc. Lond. **1907** 931-2 no. 15 sp. 27 Pf. **51** · 7 (1908).

In *Chrysopora lingulacella* Clms., as also in *Nannodia stipella* Hb. and *hermannella* F., vein HW : 6, though weak, is remote from 7 and parallel with the fold ; the discoidal is traceable, and Meyrick was justified in referring the types of *Nannodia* Hnmn. to *Aristotelia* Hb.

Type 3 : *Tinea stipella* Hb.

NANNODIA Hnmn. Schm. Deutsch. Tin. 190, 284-5 no. 426 sp. 423-4 (1870), Tbl. 5, 41 no. 426 (1876) ; Stn. Ent. Mo. Mag. **7** 168 (1871) ; Snln. Vlind. Nederl. Micr. 432, 690-2 no. 53 sp. 1-2 Pf. **9** · 286 (1882).

Type 4 : *Oecophora brizella* Tr.

§ *ERGATIS* Hnmn. Schm. Deutsch. Tin. 190, 295-8 no. 432 sp. 436-41 (1870), Tbl. 5, 42 no. 432 (1876) ; Stn. Ent. Mo. Mag. **7** 169-70 (1871) ; Snln. Vlind. Nederl. Micr. 431, 681-4 no. 50 sp. 1-3 Pf. **9** · 289 (1882).

Type 5 : *Anacamptis pulveratella* HS.

XYSTOPHORA Hnmn-Wk. = § *DORYPHORA* Hnmn. Schm. Deutsch. Tin. 190, 298-308 no. 433 sp. 442-60 (1870) : Stn. Ent. Mo. Mag. **7** 170 (1871) ; Z. Hor. Soc. Ent. Ross. **13** 359-61 no. 19 (1877). XYSTOPHORA Hnmn-Wk. (nn.) Tbl. 6 no. 433, 42 no. 433 (1876) ; Snln. Vlind. Nederl. Micr. 431-2, 684-8 no. 51 sp. 1-5 Pf. **9** · 287, **12** · 404<sup>a-b</sup> (1882) ; Drnt. Bull. Soc. Ent. Fr. **1889** p. ccxxiv (1889) ; Wlsm. Ent. Mo. Mag. **31** 42 (1895) ; Stgr-Rbl. Cat. Lp. Pal. **2** 152-3 no. 310 sp. 2786-2824 (1901).



Type 6: *Tinea tenebrella* Hb. (Hnmn. 1870).

MONOCHROA Hnmn. Schm. Deutsch. Tin. 190, 308-9 no. 434 sp. 461 (1870), Tbl. 6, 43 no. 434 (1876); Stn. Ent. Mo. Mag. 7 170 (1871).

Type 7: *Tinea atrella* (Hb.?) Hw.

§ LAMPROTUS Hnmn. Schm. Deutsch. Tin. 190, 309-11 no. 435 sp. 462-6 (1870), Tbl. 6, 43 no. 435 (1876); Stn. Mo. Mag. 7 170-1 (1871).

Type 8: *Eucatoptus penicillata* Wlsm. (Wlsm. 1897).

EUCATOPTUS Wlsm. Pr. Z. Soc. Lond. 1897 69-71 no. 11 sp. 33-6 (1897); Busck Pr. US. Nat. Mus. 25 794-5 (1903).

### 1. *Aristotelia corallina*, sp. n.

*Antennae* blackish. *Palpi* with the median joint somewhat expanded outwardly; cream-whitish, banded externally with a brownish shade; terminal joint whitish, with two blackish bands. *Head* rosy cream-colour; *Thorax* the same, but with a stronger reddish tinge, the tegulae blackish. *Forewings* blackish, the dorsum rich rosy reddish, this colour diffused upward along the termen and over the terminal cilia through which runs a somewhat obscurely reduplicated dark shade-line; terminal cilia blackish, preceded by three small rosy reddish costal spots. *Exp. al.* 12 mm. *Hindwings* dark grey; cilia brownish cinereous. *Abdomen* brownish cinereous. *Legs* brownish cinereous, broadly banded with fuscous externally on each joint.

*Type* ♂ (65760) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65762) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Three specimens.

The rosy cream of the head, thorax, and dorsum, contrasted with the blackish forewings, renders this species somewhat conspicuous.

### 2. *Aristotelia howardi*, sp. n. (Tab. I. fig. 21.)

*Antennae* blackish, with a series of elongate white spots along the upper side; basal joint reddish ochreous. *Palpi* (broken, the basal joint indicating that they were pale ochreous, or whitish, on their inner sides, and banded, or shaded, with brown, or blackish, externally). *Head* rosy ochreous. *Thorax* mottled with reddish brown and ochreous, with a grey median patch. *Forewings* milk-white, tinged with rosy pink along the costa, except at the base and along the dorsum beyond the middle; at the base is a tawny-red patch, wider on the dorsum than on the costa, narrowly darkened to black along its oblique outer margin; after an oblique fascia of the white ground-colour, which is produced outward along the dorsum, where it is tinged with bright ochreous, a rather oblique, mixed black and reddish grey streak descends from the costa at one-fourth, crossing the cell, and bent outward and upward at its lower extremity enclosing above it a patch of the ground-colour profusely stippled with pale rosy grey, bounded on its outer side by a darker, tawny reddish grey quadrangular costal spot, extending downward to an almost circular ochreous spot at the end of the cell; the terminal area is thickly sprinkled with rust-brown, and contains some black spots, notably two on the costa before the apex, in strong contrast to the rosy pink by which they are separated and partially surrounded; cilia whitish cinereous, with three pale greyish wavy shade-lines running through them; underside fuscous, with the middle of the costa narrowly touched with white, a rosy white streak running through the costal cilia. *Exp. al.* 13.5 mm. *Hindwings* shining, steel-grey, with a bright rosy iridescence; cilia pale brownish cinereous. *Abdomen*

grey. *Legs* whitish, the hind tibiae with three black bands externally, the tarsi with fuscous shade-bands, also chiefly on their outer sides.

*Type* ♂ (5841 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: SONORA: San José de Guaymas, 10. IV. (*Dr. L. O. Howard*). Unique.

A fine species of the group of *roseosuffusella* Clms., noticeable through the pure milk-white ground-colour, tinged in places with rosy pink and bright ochreous, and the sharply defined, entirely dark, basal patch, which distinguishes it from *squamigera* Wlsm., to which it is perhaps most nearly allied.

### 3. *Aristotelia squamigera*, sp. n.

*Antennae* fuscous, with whitish annulations, more distinct on the anterior surface. *Palpi* moderately smooth, recurved, terminal joint scarcely longer than the median, acuminate; rosy whitish, sprinkled with brownish fuscous, an ill-defined band of the darker colour at the base and another before the apex of the median joint; also two ill-defined bands before and beyond the middle of the terminal joint. *Head* and *Thorax* whitish grey, sprinkled with brownish fuscous; the latter with a few fawn-ochreous scales at the sides and behind. *Forewings* rosy white, profusely sprinkled with brownish fuscous; an olivaceous brown patch at the base, much wider on the dorsum than on the costa, its outer edge oblique and somewhat clearly defined, its surface sprinkled, especially towards the base, with whitish scales; at about one-third a strong olivaceous brown costal patch, dilated obliquely outward and downward to the fold, is terminated at its outer extremity by a blackish spot; beyond the middle a triangular olive-brown costal patch is terminated by a line of blackish scales truncating its apex on the cell, where it is joined by a fawn-ochreous patch extending to the dorsum, but sprinkled about the end of the fold with olive-brown scaling; a short blackish dash cuts the pale fascia beyond the end of the cell, the terminal area being sprinkled with olive-brown leading up to some blackish marginal spots at the base of the greyish ochreous cilia through which run two curved shade-lines enclosing the white apex; there is a small brownish ochreous streak below the fold adjoining the lower edge of the second dark patch; underside somewhat ochreous, profusely sprinkled along the middle with greyish fuscous scaling, not especially noticeable at the base. *Exp. al.* 10–12 mm. *Hindwings* rather shining brassy grey, the dorsal half profusely dusted with elongate greyish fuscous scales; cilia ochreous, tinged with grey, very long on the costa in the ♂; underside less ochreous than the forewings, and more profusely scaled with greyish fuscous beyond the base throughout. *Abdomen* greyish ochreous, much sprinkled with brownish fuscous; with whitish lines along the margins of the segments beneath. *Legs* whitish, with strong fuscous scaling in transverse bands across the tibiae, and on the outer sides of the tarsi.

*Type* ♂ (65763) Mus. Wlsm. (*Godm-Salv. Coll.*). [PTT. (65765, 65770) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Seven specimens.

Closely allied to *roseosuffusella* Clms., and agreeing fairly in the position of the white costal marks, which in both species extend with more or less suffusion across the wings, but *squamigera* lacks the pale fawn colouring on the dorsum, and the strong rosy tint which usually accompanies this; moreover, the sprinkling of dark scales, on the otherwise pale underside of both wings, is not found in Clemens' species, and the very long costal cilia, commencing at the base of the hindwings, is very characteristic.

### 4. *Aristotelia hieroglyphica*, sp. n.

*Antennae* minutely serrate towards the apex; brown, with white annulations, the basal joint with a white ring round its apex. *Palpi* dull brownish white, the median joint with two fawn-brown bars externally;

# HETEROCERA.

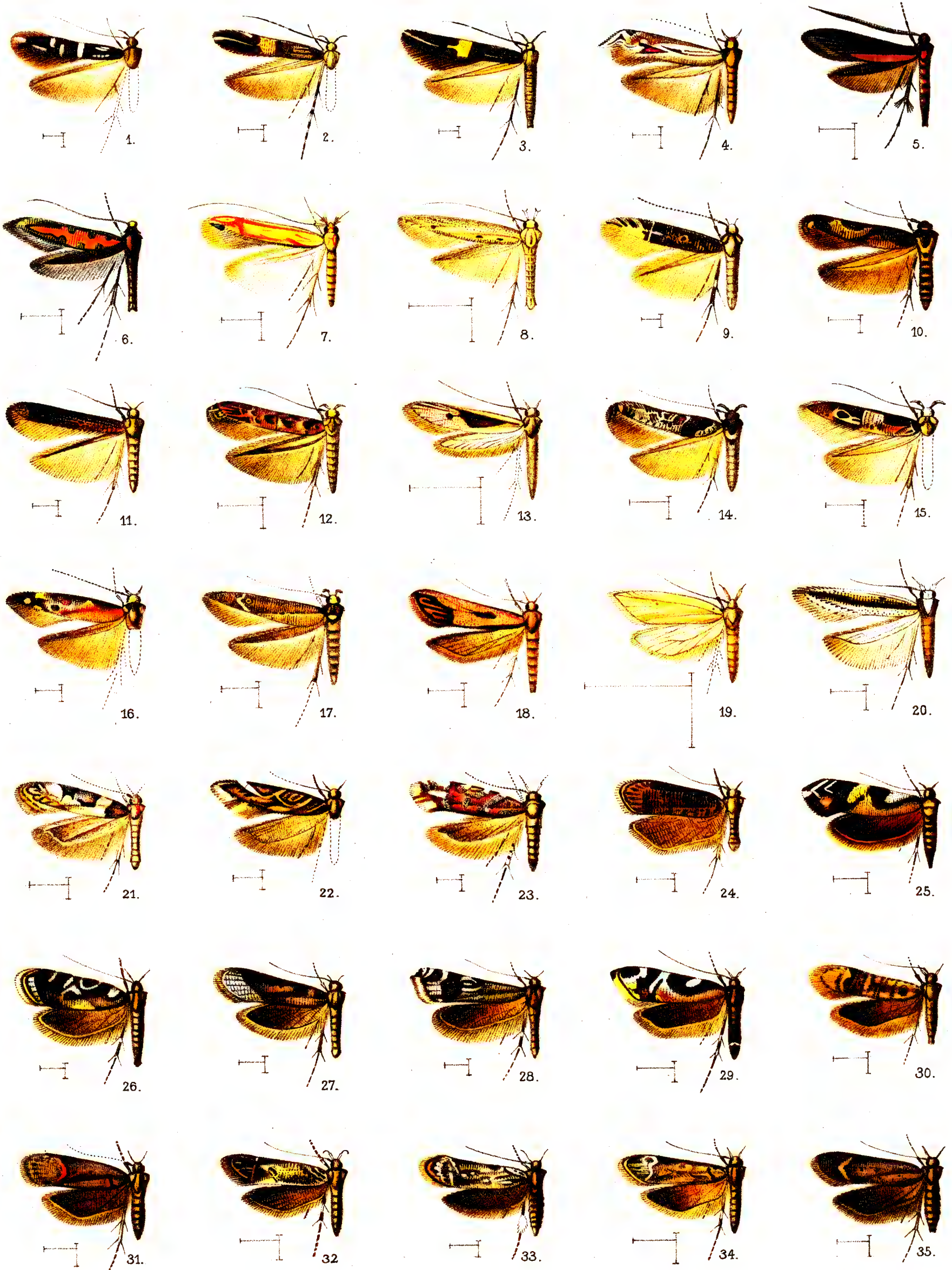
## TINEINA.

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the terminal, which is longer than the median and very slender, sprinkled and annulate with darker brown. *Head* fawn-brown, mixed with greyish fuscous; the *Thorax* darker brown, mixed with pale cinereous. *Forewings* dark fawn-brown, paler along the dorsal half, with a pale patch at the lower angle of the cell; a whitish cinereous fascia leaves the costa at about one-sixth, running obliquely outward to the fold, but not traceable below it—this fascia is somewhat widened, showing a tendency to reduplication by brown scales along its middle; parallel with this is a short oblique costal streak before the middle, and beyond the middle is another, converging at its apex with a similar inverted costal streak from before the end of the wing, from the inner edge of the first a narrow line of the same colour crosses the fold inward, but does not reach the dorsum; between these markings a slight suffusion of blackish scales extends from base to apex, and there are also some shining steel-grey scales about the ends of the second and third costal streaks, and in a small separate patch above the tornus; cilia pale cinereous, with a pinkish tinge, merging to pale greyish fuscous on the dorsum. *Exp. al.* 11 mm. *Hindwings* and cilia pale greyish fuscous, with a slight rosy tinge. *Abdomen* brownish cinereous. *Legs* whitish, with oblique brown tibial and tarsal bands externally.

*Type* ♂ (65822, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65823) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: *Teapa*, III. (*H. H. Smith*). Two specimens.

This differs from *pyrodercia* Wlsm. in having more abundant sprinkling of blackish scales, and in the two black patches on the cell; also in the silvery scaling being very slight and inconspicuous, this, however, may depend somewhat on the condition of the specimens.

### 5. *Aristotelia dasypoda*, sp. n. (Tab. I. fig. 22.)

*Antennae* dark fuscous, spotted with white above. *Palpi* whitish, with two brownish bands around the median joint, and a fuscous shade-band beyond the middle of the terminal, of which the tip is also fuscous. *Head* brownish ochreous. *Thorax* ferruginous, with a steely grey sheen above, and a steel-whitish transverse band posteriorly. *Forewings* ferruginous, with some black scaling, and three outwardly oblique white streaks from the costa, all more or less mixed with shining steely scales; the first, at about one-fifth, is reduplicated, margined on its inner side with black scales which become concentrated in a spot resting on the fold, and reaches with its lustrous steely apex nearly to the dorsum at one-third; the second, single, reaching to a blackish spot on the fold and produced again below it in shining steel-grey to the dorsum beyond the middle; the third, from a little beyond the middle of the costa, passes on the outer side of a black dot at the end of the cell, to which the steel-grey scaling of the second streak extends, where it meets the apex of a fourth, similar, but inverted oblique white streak, coming from the costal cilia; beyond this again is some black scaling extending outward to the apex; a small detached steely streak above the flexus, and a few steely scales above the tornus complete the rather confused pattern; cilia greyish ochreous, shaded with fuscous, some steely scales along their base. *Exp. al.* 11 mm. *Hindwings* and cilia rather pale greyish fuscous. *Abdomen* (missing). *Legs* white, with three brownish fuscous bands on the hind tibiae and three on the tarsi; anterior pair somewhat similarly coloured, but with a thick-set projecting brush of fuscous scales on the underside of the tibiae of the ♂.

*Type* ♂ (65826, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PTT.* (76077, 76079, 76100) US. Nat. Mus.]

*Hab.* AMERICA, C-I. Central America—MEXICO: TABASCO: *Teapa*, III. (*H. H. Smith*). West Indies—JAMAICA: ST. ANDREW: Constant Springs, 24.XII – 2.I. 1905 (*Wlsm.*). Eleven specimens.

The projecting brush of scales on the front tibiae of the ♂ distinguishes *dasypoda* from any known species of the genus.

BIOL. CENTR.-AMER., Heter., Vol. IV., April 1910.

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### 6. *Aristotelia pyrodercia*, sp. n.

*Antennae* delicately annulated with black and white. *Palpi* yellowish white, the median joint twice annulated with brassy brown; terminal joint longer than the median, with three blackish annulations, widening in succession from the base. *Head* pale buff-brown. *Thorax* pale buff-brown, with a rather shining steel-brown median streak. *Forewings* yellowish brown, crossed by oblique whitish streaks mixed with shining steel-like metallic scales, some minute blackish scales intermixed along their margins; a slender steely line, commencing at the base of the costa, crosses the fold obliquely outward to the dorsum, beyond it is a broader whitish costal streak, also crossing the fold obliquely outward, but scarcely reaching the dorsum; a third steely streak, from the costa before the middle, tending obliquely outward, is enlarged at the lower end of the cell and reverts to the middle of the dorsum, it is preceded by a pale plical spot margined on its inner side by black scales; beyond this, about the middle of the costa, an oblique whitish streak tends outward to the end of the cell where it meets a more conspicuous white streak inverted from the costal cilia, both mixed with pale steel and blackish scales; beyond the last white costal streak the costal cilia are greyish fuscous, with two inverted whitish streaklets at their base, a third shining white streak following the termen at the base of the whitish cilia through which run two dark shade-lines terminating before the tornus where a yellowish white line in the tornal cilia interrupts them; near the base of this is a luminous steely spot, with some minute black scales along the margin. *Exp. al.* 12 mm. *Hindwings* and cilia tawny greyish. *Abdomen* brownish cinereous. *Legs* whitish, banded externally on the tibiae and tarsi with brownish fuscous.

*Type* ♀ (65774) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65775) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Tierra Colorada, 2000 ft., X. (*H. H. Smith*); Amula, 6000 ft., VIII. (*H. H. Smith*). Three specimens.

This species differs from *hieroglyphica* Wlsm. in the more olivaceous brownish-ochreous ground-colour which lacks the blackish shades, in the basal half especially, and the silvery markings connected with the outer streaks are more conspicuous.

### 7. *Aristotelia sarcodes*, sp. n. (Tab. I. fig. 23.)

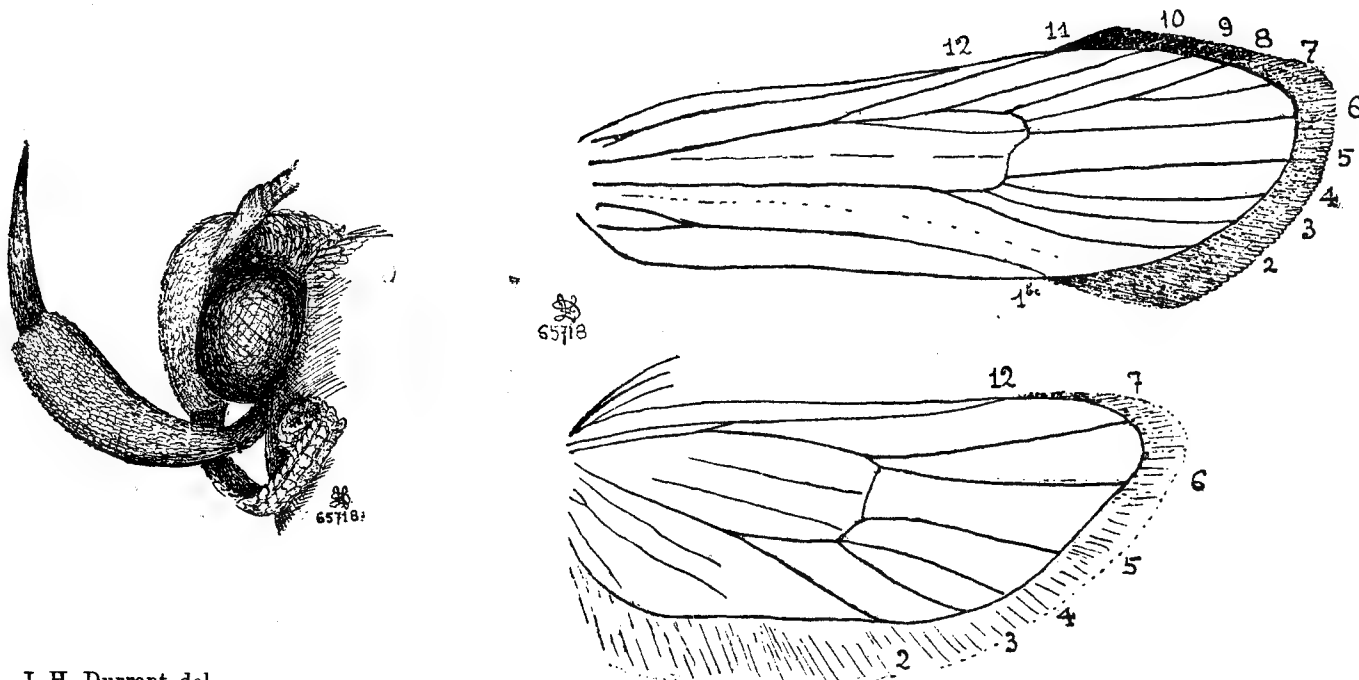
*Antennae* black, with elongate white spots along the upper side; basal joint white, with a black line beneath and a spot above. *Palpi* white, median joint with two black bands not reaching the upper surface; terminal joint with four black bands of which the outer two only complete its circumference. *Head* pale brownish, mixed with whitish scales. *Thorax* pale rust-brown, with some silvery median scales. *Forewings* yellowish brown, or light rust-brown, with white and shining silvery costal and dorsal streaks, more or less confluent on the wing-middle, and with two, noticeable, rosy flesh-coloured, short length-streaks, one at the upper edge of the outer end of the cell, the other wider, beyond the end of the cell; there is a rather oblique white costal streak, at one-fifth, with a few black scales along its inner edge, its outer half touched with shining silvery; this meets the apex of a short silvery dorsal streak, at about one-fourth, and is followed by a second, shorter, silvery and white costal streak to which there is no corresponding dorsal one; a third, silvery and white costal streak, is scarcely beyond the middle, and is interrupted by the first rosy flesh-coloured streak before joining a longer silvery oblique streak from the middle of the dorsum; beyond this again are four short white costal streaks before the apex, the first two sometimes confluent, and both tipped with silvery, the second rosy flesh-coloured length-streak separating them from a long silvery dorsal streak arising obliquely outward from near the tornus; there are also a few silvery scales on the termen below the outer white costal streak which occupies the apex and apical cilia; terminal cilia whitish, touched with brown on the middle of the termen and at the tornus. *Exp. al.* 10 mm. *Hindwings* dark slaty grey, with a strong rosy iridescence; cilia brownish grey; ♂ with dull ochreous subcostal hair-pencil. *Abdomen* grey. *Legs* white, hind tibiae and tarsi with black bands across their outer sides.

*Type* ♂ (5842, Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, 1907 (*A. Busck*). Unique.

## CATHEGESIS, gen. n.

(καθηγησις = a leading.)

Type: *Cathegesis vinitincta* Wlsm.

J. H. Durrant, del.

7. *Cathegesis vinitincta* Wlsm. ♀.

*Antennae*  $\frac{2}{3}$ , simple; basal joint without pecten. *Labial Palpi* compressed, median joint thickened with smoothly appressed scales, terminal joint rather thick at base. *Maxillary Palpi* rudimentary. *Haustellum* well-developed, scaled throughout. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* with costa deflexed, evenly rounded to tornus, apex not defined: *neuration* 12 veins; 7 and 8 stalked, to costa; 2-6 separate. *Hindwings* 1, costa straight, apex rounded; termen scarcely sinuate beneath apex, thence evenly rounded; cilia  $\frac{1}{3}$ - $\frac{1}{2}$ : *neuration* 8 veins; 3 and 4 connate; 5 cubital; 6 and 7 truncate. *Abdomen* moderate. *Legs*, hind tibiae with rough hairs above.

Nearest to *Acompsia* Hb. (= *Brachycrossata* Hnm.; \**Recurvaria* Meyr.), but differing in HW: 3-4 being connate, not stalked; also in the peculiar rounded apex of the forewings. The genus reminds one of the *Trichotaphe* Clms. group of the genus *Dichomeris* Hb., with which it agrees fairly well in the form of the palpi, but it is at once distinguished by having FW: 2-3 separate, not stalked. The terminal joint of the palpi is shorter than the median in *vinitincta*, but slightly longer in *tridentella*.

1. *Cathegesis vinitincta*, sp. n.

*Antennae* tawny fuscous, annulate with pale ochreous. *Palpi* tawny fuscous, the terminal joint shorter than the median, its upper half pale ochreous. *Head* shining, cinereous. *Thorax* tawny greyish fuscous. *Forewings* shining, tawny greyish fuscous, with a broad semicircular chocolate-brown dorsal patch reaching from near the base to near the middle, its upper third crossing the fold; an elongate chocolate-brown streak from the outer end of the cell nearly reaching the termen below the apex; the apex itself is rounded, but the form of the tawny brownish cilia above it gives the depressed costa a strongly angulate appearance before it; a pale cinereous line runs around the base of the tawny greyish terminal cilia. *Exp. al.* 16 mm. *Hindwings* wider than the forewings; bronzy brown; cilia greyish brown. *Abdomen* bronzy brownish. *Legs* bronzy brownish, the femora and tibiae to the first pair of spurs whitish cinereous; some indistinct pale spots on the tarsi.

Type ♀ (65718, Cerro Zunil) Mus. Wlsm. (Godm-Salv. Coll.). [PT. (65719) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (H. H. Smith)—GUATEMALA: Cerro Zunil, 4000-5000 ft. (G. C. Champion). Two specimens.



## 2. *Cathegesis tridentella*, sp. n. (Tab. I. fig. 24.)

*Antennae* cinereous, annulate with brownish. *Palpi* with the median joint slightly tufted above at its apex, the terminal joint longer than the median, slightly recurved, divergent; cinereous, banded with greyish brown at the end of the median joint, on the middle of the terminal joint, and again narrowly before the apex. *Head* brownish cinereous; face scarcely paler. *Thorax* brownish grey. *Forewings* brownish cinereous, shaded with greyish brown along the costa, except at the base and on the apical fifth; this darker shading is diffused downward as far as the middle of the fold, and in a broken and diluted form reaches the dorsum and extends outward to above the tornus, where it is terminated by a pale anteapical band sinuate inward below the costa and outward above the tornus, the somewhat pale apical space containing three dark fuscous tooth-like streaks; cilia pale cinereous, with a greyish brown shade running along their middle. *Exp. al.* 13 mm. *Hindwings* broader than the forewings, trapezoidal, scarcely sinuate below the apex; brownish grey; cilia pale cinereous, with a darker shade running through them before their middle. *Abdomen* brownish grey, anal tuft inclining to ochreous. *Legs* pale brownish cinereous.

*Type* ♂ (65743) Mus. Wlsm. (Godm-Salv. Coll.).

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Unique.

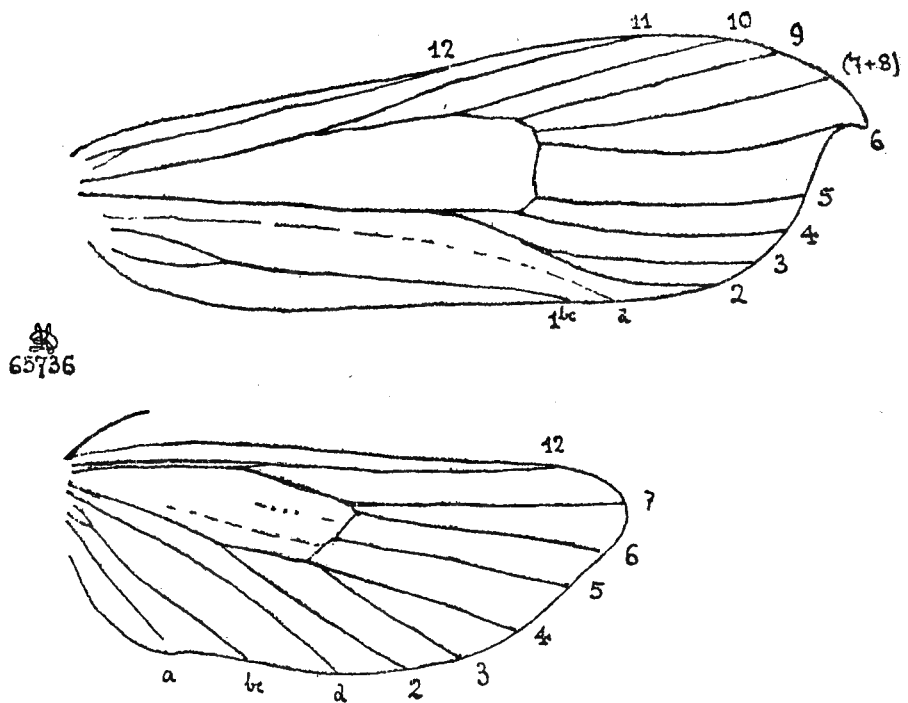
## SYSTASIOTA, gen. n.

(συστάσιωτης = a partisan.)

*Type*: *Systasiota leucura* Wlsm. (Tab. I. fig. 25.)



J. H. Durrant, del.



8. *Systasiota leucura* Wlsm. ♂.

*Antennae*  $\frac{2}{3}$ , simple; basal joint without pecten. *Labial Palpi* slender, recurved, smooth; the terminal and median joints about equal in length. *Maxillary Palpi* rudimentary. *Haustellum* well-developed. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* elongate, widening somewhat outwardly, costa subsinuate, apex caudate, termen sinuate, tornus rounded: *neuration* 11 veins; 7 and 8 coincident, to costa; 2 and 3 stalked. *Hindwings* 1, apex obtuse, termen subsinuate: *neuration* 8 veins; 3 and 4 short-stalked; 5 radial; 6 and 7 truncate. *Abdomen* smooth. *Legs* smooth; hind tibiae slightly hairy above.

Derived from *Holophysis* Wlsm., which it much resembles in general structure and appearance; it differs in the coincidence of FW: 7-8, and the caudate apex. *Drepanoterma* Wlsm. differs in its longer antennae, and more developed palpi with shorter terminal joint.

1. *Systasiota leucura*, sp. n. (Tab. I. fig. 25.)

*Antennae* mouse-grey. *Palpi* mouse-grey, paler on their inner sides; the median and terminal joints about equal in length, slender, recurved, naked. *Head* olive-grey, the face paler. *Thorax* olive-grey, with a dark brownish band across the front; silvery whitish beneath. *Forewings* dark umber-brown, with a leaden grey costal patch at the base reaching nearly to one-third, widened and produced downward at its outer end, but scarcely touching the fold; joining it at the extreme base is a leaden grey band, running along the dorsum below the fold to beyond the middle, where it is joined by a transverse fascia starting narrowly on the costa, enclosing a dark brown spot on the cell and consisting above the middle of shining silvery blue-grey scales, a narrower subapical fascia of the same colour, much zigzagged in its course, precedes the termen; the apex is slightly caudate, and is distinctly marked by a slender whitish ochreous line, along the base of the dark brown costal cilia, which is continued along the upper half of the sinuate termen; terminal cilia dark brown, with a curved white patch immediately below the apex which is very apparent on the underside. *Exp. al.* 13 mm. *Hindwings* dark bronzy brown; cilia slightly paler; underside with a broad silvery whitish costal patch beyond the middle. *Abdomen* shining leaden greyish; silvery whitish beneath. *Legs* dark brown, with two broad white bands on the tibiae and three or four white tarsal annulations.

*Type* ♂ (65736) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

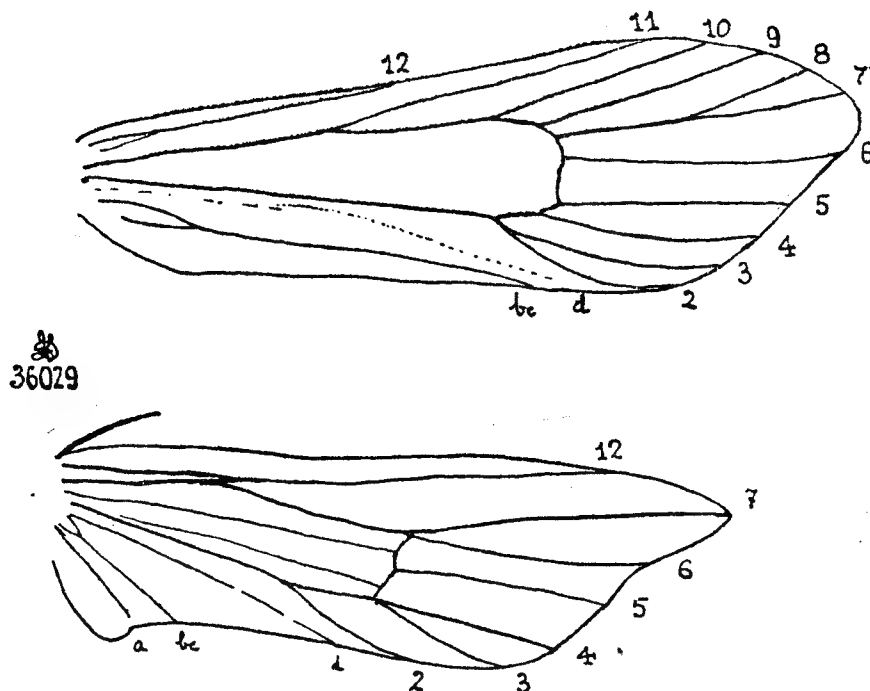
## HOLOPHYSIS, gen. n.

(*ὅλος*=entire; *φύσις*, a form.)

*Type*: *Strobisia emblemella* Clms.



J. H. Durrant, del.



9. *Holophysis emblemella* Clms. ♂.

*Antennae*  $\frac{3}{4}$ , slightly serrate; basal joint without pecten. *Labial Palpi* slender, recurved, divergent, smooth; terminal joint as long, or longer than median, acute. *Maxillary Palpi* rudimentary. *Haustellum* well-developed. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* elongate, rather narrow, widening somewhat outwardly; costa rather straight, apex depressed, obtuse, termen subsinuate: *neuration* 12 veins; 7 and 8 stalked, to costa; 2 and 3 stalked; rest separate. *Hindwings* 1, apex obtuse, termen slightly sinuate: *neuration* 8 veins; 3 and 4 short-stalked; 5 radial; 6 and 7 connate, or closely approximate. *Abdomen* smooth. *Legs* smooth; hind tibiae slightly hairy above.

Derived from *Anacamptis* Crt., from which it differs in the shorter palpi, and in FW: 2-3 being stalked; it resembles *Strobisia* Clms., and *Trichotaphe* Clms., in

general appearance, but differs from the former in having all the veins present in the forewings, and from both in having vein HW: 5 radial, instead of cubital.

Correlated with, and very similar to *Perioristica* Wlsm., which however differs in having FW: 2-3 separate. The Central American species resembles *Perioristica chalcopera* Wlsm. in the cilia of the forewings having a tendency to become falcate; this is not so noticeable in *emblemella* Clms.

### 1. *Holophysis anoma*, sp. n.

*Antennae* leaden grey. *Palpi* silvery grey; very slender, recurved, the terminal joint longer than the median, reaching high above the vertex. *Head* dull leaden grey; face shining silvery. *Thorax* dull leaden grey; silvery white beneath. *Forewings* dull leaden grey at the base, becoming more shining at a little distance from it, this colour is continued along the dorsum blending into a shining silvery grey fascia beyond the middle which is attenuated and recurved upward to the costa, thus enclosing a broad bronzy brown costal patch, its convex lower extremity touching the fold on which it is preceded by a small brown spot; in the silvery fascia is also a small elongate brown spot about the end of the cell; the apical portion of the wing is bronzy brown, with a shining silver-grey costal spot at the commencement of the cilia and a larger shining silver-grey patch arising from the tornus and terminating below and beyond the costal spot; cilia brownish cinereous, a dark line running through them near their base parallel with the rounded apex. *Exp. al.* 10 mm. *Hindwings* greyish brown, the cilia shading to pale cinereous toward the apex. *Abdomen* bronzy brownish, silvery white beneath. *Legs* bronzy brownish, hind tibiae banded and tipped with white, the tarsi with four white annulations.

*Type* ♂ (65739) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65740) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*). Four specimens.

### 2. *Holophysis stigmatophoria*, sp.n.

*Antennae* slightly serrate towards the apex; bronzy brown. *Palpi* pale greyish, shaded with bronzy brown along their underside. *Head* bronzy brown above; face whitish. *Thorax* shining, bronzy brown. *Forewings* shining, bronzy brown, with brilliant silvery streaks becoming white towards the costa; the first of these is at one-fourth, running obliquely outwards from the costa to a little beyond the fold, this is almost entirely silvery white; the second is a little beyond the middle, forming an irregular outwardly-curved fascia reduplicated on the cell, white on the costa with a slight aeneous tinge beneath it; the third forms a slightly oblique spot at the commencement of the costal cilia, a fourth appearing as an elongate, slightly aeneous, silvery patch along the termen; cilia about the apex brown, with a slender line along their base and a wider one along their middle giving a somewhat caudate appearance, beneath the apex the cilia are greyish, partaking of the metallic gloss of the terminal patch. *Exp. al.* 10 mm. *Hindwings* bronzy brown, slightly paler than the forewings; cilia tipped with greyish. *Abdomen* shining bronzy fuscous, with a white patch beneath, forming two lateral bands at the commencement of the dark anal tuft. *Legs* white; hind tibiae with two broad bands of brownish fuscous, hind tarsi with one broad band and three narrower bands of the same; spurs white.

*Type* ♂ (65733) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65734) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

### 3. *Holophysis quadrimaculata*, sp. n. (Tab. I. fig. 26.)

*Antennae* greyish fuscous. *Palpi* whitish cinereous. *Head* and *Thorax* greyish fuscous. *Forewings* dark brownish fuscous, with four steel-grey costal streaks, all inclining a little outwards; the first, near the base, reaching over the fold; the second at one-fourth not reaching the fold; the third, median, reaching to the lower angle of the cell and scarcely separated from a diffused patch of the same colour before and beneath it; the fourth at three-fourths of the wing-length, shorter than the others, a line of steel-

grey scales preceding the termen; cilia greyish, becoming almost white at the apex, with a dark line running through them at their base. *Exp. al.* 8 mm. *Hindwings* and cilia greyish fuscous, the latter tipped with white at the apex. *Abdomen* greyish fuscous; white beneath. *Legs* greyish fuscous, with white patches on the tibiae, and white spots on the tarsal joints.

*Type* ♂ (65716) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65717) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Two specimens.

#### 4. *Holophysis xanthostoma*, sp. n. (Tab. I. fig. 27.)

*Antennae* dark brown, the terminal six joints white. *Palpi* and *Haustellum* yellow. *Head* brown; face steel-white. *Thorax* bronzy brown. *Forewings* dark bronzy brown, shading into shining brassy metallic along the dorsum below the fold, and in a broad oblique terminal band; two shining pale aeneous costal spots, one near the base, the other a little before the middle, are followed by two minute white costal dots, one about the middle, the other beyond; cilia brownish. *Exp. al.* 9 mm. *Hindwings* and cilia brown, paler than the forewings. *Abdomen* bronzy grey. *Legs*, anterior pair yellow at the base; posterior mouse-grey above, whitish aeneous beneath.

*Type* ♂ (65735) Mus. Wlsm. (*Godm-Salv. Coll.*).

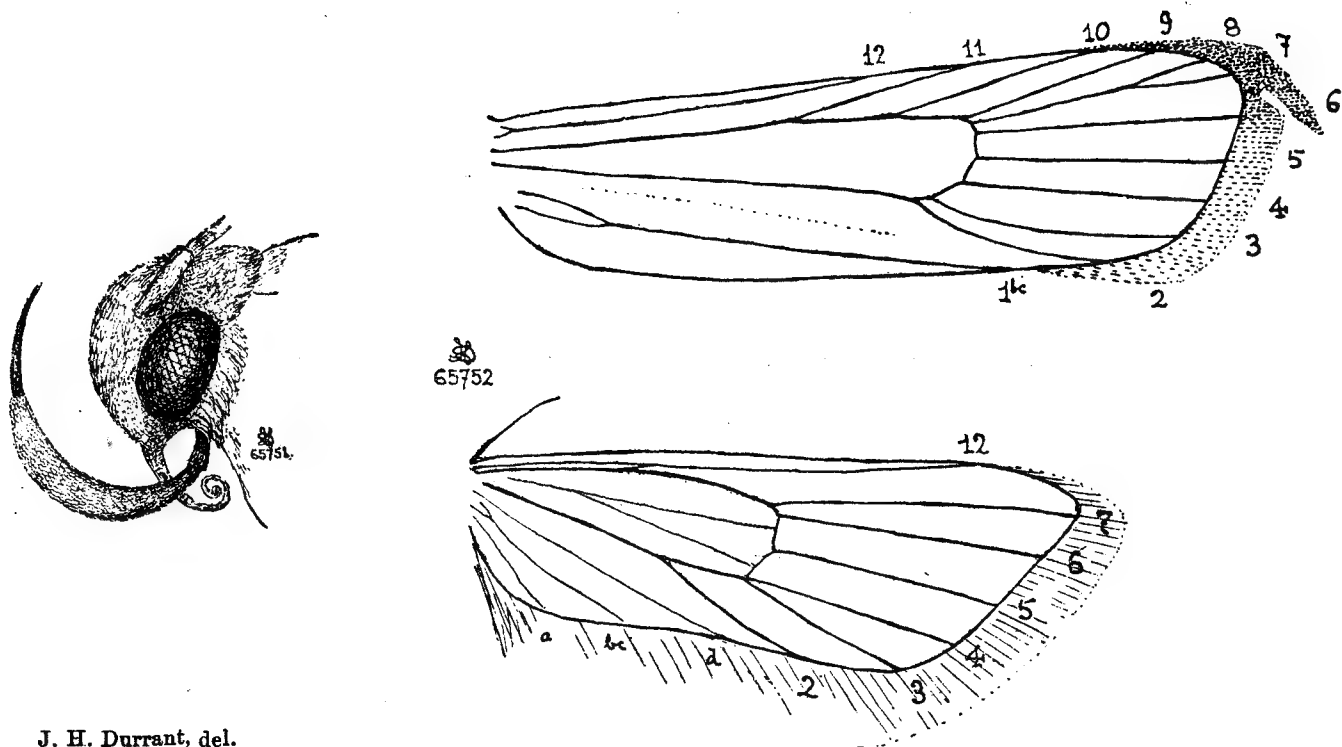
*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

Closely allied to *quadrimaculata* Wlsm., but easily separable by its yellow palpi and front tibiae.

#### PERIORISTICA, gen. n.

(περιοριστική = serving to determine.)

*Type*: *Perioristica chalcopera*, sp. n. (Tab. I. fig. 28.)



J. H. Durrant, del.

10. *Perioristica chalcopera* Wlsm. ♂.

*Antennae*  $\frac{3}{4}$ , simple, smooth; basal joint without pecten. *Labial palpi* ascending, recurved, tapering, acute, smooth; terminal joint scarcely half as long as the median, which is slightly thickened. *Maxillary Palpi* short, dependent. *Haustellum* well-developed. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* with straightened costa, obtuse, not depressed, apex falsely uncate by dependent produced point in cilia; termen slightly oblique, tornus rounded: *neuration* 12 veins; 7 and 8 stalked, to costa; 2-6 separate, 2-3 approximate. *Hindwings* broader than forewings, somewhat trapezoidal, widening outward, apex slightly rounded, termen oblique, slightly sinuate, tornus well-defined, but blunted: *neuration* 8 veins;

6 and 7 closely approximate; 3 and 4 connate; 5 radial, parallel, midway between 4 and 6. *Abdomen* smooth. *Legs* smooth; hind tibiae slightly hairy above.

Closely allied to *Anacamptis* Crt., from which it appears to be derived, but differing in the caudate cilia of the forewings, and in the short terminal joint of the palpi.

1. **Perioristica chalcopera**, sp. n. (Tab. I. fig. 28.)

*Antennae* bronzy brownish grey. *Palpi* white at the base and on the inner sides, thence stained with steely grey. *Head* and *Thorax* brownish grey, with a slight cupreous tinge; face white. *Forewings* bronzy brown, overlaid on the basal half with a greenish grey iridescent sheen, the outer edge of which is obliquely terminated a little before the middle of the costa, and throws out a short white streak along the cell; above this is a slender, oblique, detached white streaklet, and an outwardly oblique white costal streak, more or less connected by scattered whitish scales at its apex with the apex of the median streak, and again to the apex of a similar streak a little above the dorsum; at four-fifths is a second, short, straight white costal streak, loosely connected by scattered scales, at its apex, with a striated patch above the tornus, in which they form the upper of a series of three short longitudinal white streaks, bounded before and behind by a whitish line; on the costa at the apex are two converging wedge-shaped white streaks, divided by a dark brown line, which is continued along the termen to the tornus; the outer of these is wider than the inner, and forms the base of the caudate apical extension of the cilia which are bronzy brown beyond it, those on the termen below being bright rosy, iridescent, brassy metallic. *Exp. al.* 10 mm. *Hindwings* and cilia brown, with iridescent, bluish, steely grey reflections. *Abdomen* cupreous. *Legs* dark bronzy brown, with white bands, those on the hind tibiae oblique.

*Type* ♂ (65751) Mus. Wlsm. (*Godm-Salv. Coll.*). [PT. (65752) US. Nat. Mus.]

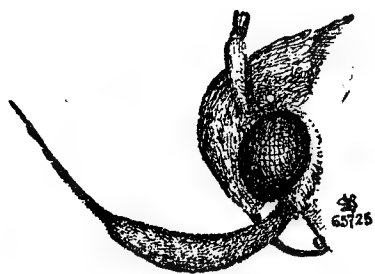
*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

Very similar to *Anacamptis perinaeta* Wlsm., which also occurs at Amula, in August: the caudate cilia and the much shorter terminal joint of the palpi will at once separate *chalcopera*.

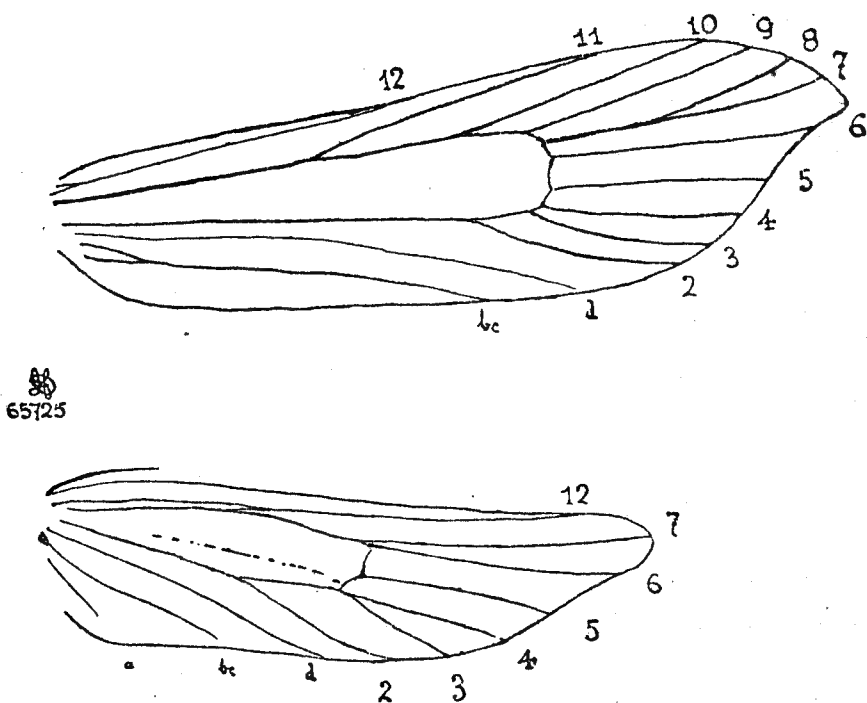
DIASTALTICA, gen. n.

(διασταλτική=serving to distinguish.)

*Type*: *Diastaltica separabilis* Wlsm. (Tab. I. fig. 29.)



J. H. Durrant, del.



11. *Diastaltica separabilis* Wlsm. ♂.

*Antennae*  $\frac{2}{3}$ , slightly serrate towards apex; basal joint without pecten. *Labial Palpi* long, smooth, recurved; terminal and median joints about equal in length. *Maxillary Palpi* short. *Haustellum* well-developed. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* narrow at the base, somewhat widened outwardly, costa slightly arched near the base, apex scarcely depressed, pointed, termen sinuate, very oblique, tornus rounded: *neuration* 12 veins; 7 and 8 stalked, to costa; 2-6 separate, 2 remote from 3. *Hindwings* 1, costa straight, apex obtusely pointed, termen slightly sinuate, dorsum parallel with costa: *neuration* 8 veins; 3 and 4 connate; 5 cubital; 6 and 7 connate. *Abdomen* smooth. *Legs* smooth; hind tibiae slightly haired above.

This genus is separable from *Acompsia* Hb. (= *Brachycrossata* Hnmn.) by the position of vein FW: 2, as also by its general structure and appearance.

### 1. *Diastaltica separabilis*, sp. n. (Tab. I. fig. 29.)

*Antennae* pale cinereous, annulate with dark brown. *Palpi* pale cinereous. *Head* and *Thorax* brownish grey; face pale cinereous. *Forewings* dark bronzy brown, a pale aeneous band, commencing at the base of the costa, is dilated downward to the dorsum, and continued outward along it to the middle, where it is turned upward to the fold, joining the inner branch of a shining steel-grey furcate fascia, which, descending from the costa, scarcely beyond the middle, encloses an elongate, transverse, brown spot, near its outer side on the cell; this is preceded, halfway to the base, by an outwardly oblique, shining, steel-grey, metallic, cuneiform costal blotch; a sinuate band of the same colour commences with the costal cilia, suddenly angulated outward below them, and diffused along the lower half of the termen; between the outer and the central fascia, as also on the dorsum between the forks of the latter, the dark ground-colour is thickly sprinkled with golden-brown scales; terminal cilia whitish cinereous, with a pure white patch below the apex, a dark brown line along their base; costal and tornal cilia brown. *Exp. al.* 13 mm. *Hindwings* dull brown; cilia with a slight greyish tinge, especially toward the apex. *Abdomen* dark bronzy brownish grey, with a white ring around the base of the genital segment. *Legs* dark brown, with two broad white bands around the tibiae, and four smaller ones around the tarsi; spurs white.

*Type* ♂ (65725) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* GUATEMALA: Volcan de Agua, 8500-10,500 ft., 13. I. 1881 (*G. C. Champion*).  
Unique.

### ANACAMPSIS Crt.

= *TACHYPTILIA* Hnmn.

*Type*: [Ph. *Tinea*] *populella* Cl. (Crt. 1827).

ANACAMPSIS Crt. Br. Ent. 4 expl. Pl. 189 (1827); Stph. Ill. Br. Ent. Haust. 4 204-17 no. 320 sp. 1-47 (1834), 400 (1835); Dp. Ann. Soc. Ent. Fr. 7 139-40 no. 17 (1838); HN. Lp. Fr. 11 18, 266-80 no. 17 (1838); Wstwd. Syn. Gn. Br. Ins. 110 (1840); HS. SB. Schm. Eur. 5 11, 43 no. 67 Pf. 12 36-8 (1853), 189-203 sp. 506-64 (1854). *TACHYPTILIA* Hnmn. Schm. Deutsch. Tin. 189, 321-3 no. 438 sp. 485-7.1 (1870), Tbl. 5, 45 no. 438 (1876); Z. Hor. Soc. Ent. Ross. 13 361-3 no. 20-1 Pf. 5 121-2 (1877); Snln. Vlind. Nederl. Micr. 428, 611-13 no. 42 sp. 1-2 Pf. 8 262, 265 (1882); Meyr. HB. Br. Lp. 569, 604 no. 13 sp. 1-2 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 151 no. 307 sp. 2776-83 (1901). ANACAMPSIS Wlsm. Ent. Mo. Mag. 31 41, 43 (1895); Pr. Z. Soc. Lond. 1897 79-82 no. 17 sp. 58-64 (1897); Drnt. Ent. Mo. Mag. 33 221 (1897); Busck Bull. US. Nat. Mus. 52 509-11 no. 5701-13 (1902); Pr. US. Nat. Mus. 23 230-1 Pf. 1 6 (1900); 25 773, 844-51, 935 Pf. 31 28 (1903); 27 760-1 (1904); Can. Ent. 38 121 (1906); Pr. Ent. Soc. Wash. 11 88 (1909).

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### 1. *Anacamptis acosmeta*, sp. n.

*Antennae* stone-grey. *Palpi* stone-grey, with a patch of tawny fuscous at the base externally, the terminal joint also tipped with tawny fuscous. *Head* and *Thorax* pale stone-grey. *Forewings* pale stone-grey, with minute sprinkling of tawny fuscous, especially across the apical fourth of the wing, at the commencement of which is a minute ochreous costal spot and another opposite to it on the dorsum, the latter encircled above by tawny fuscous scales; along the termen are two or three minute groups of black scales preceding the pale stone-grey cilia. *Exp. al.* 11 mm. *Hindwings* pale stone-grey, somewhat transparent and subiridescent, especially about the flexus; cilia very pale brownish cinereous. *Abdomen* (missing). *Legs* very pale brownish cinereous, suffused with greyish externally.

*Type* ♂ (35714) Mus. Wlsm. [PT. (35715) US. Nat. Mus.]

*Hab.* NW. MEXICO: SONORA: 1883 (*H. K. Morrison*). Two specimens.

A small plain-coloured species, most nearly allied to 5703 *crescentifasciella* Chmb., but distinguishable by the anteternal dark-margined ochreous dot—evidently the lower extremity of an obsolete transverse fascia.

### 2. *Anacamptis balia*, sp. n.

*Antennae* bright ochreous. *Palpi* dull pale ochreous; terminal joint as long as the median, both smooth. *Head* shining leaden bluish, face paler; ochreous around the eyes. *Thorax* leaden brownish. *Forewings* leaden brownish, thickly and profusely sprinkled with pale cinereous scales, leaving a very ill-defined and scarcely perceptible darker medio-costal spot, and a ternal shade diffused outward and upward, and a small spot above the middle of the termen; cilia brownish fuscous. *Exp. al.* 17 mm. *Hindwings* pale chocolate-brown; cilia greyish cinereous. *Abdomen* brownish, anal tuft and underside pale. *Legs* dark brownish grey, hind tibiae and tarsi each with two pale bands.

*Type* ♂ (65744) Mus. Wlsm. (*Godm-Salv. Coll.*). [PT. (65745) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Tierra Colorada, 2000 ft., X. (*H. H. Smith*): MORELOS: Cuernavaca, VI. (*H. H. Smith*). Two specimens.

The ochreous antennae and palpi render this species somewhat distinct.

### 3. *Anacamptis epibola*, sp. n.

*Antennae* ashy grey. *Palpi* bone-whitish; terminal joint longer than median, sprinkled beneath with ashy grey, the median joint also shaded with ashy grey at its base externally. *Head* and *Thorax* ashy grey; face paler. *Forewings* ashy grey, with sparsely scattered greyish fuscous speckling, the usual spots are not more noticeable than other specks; near the base of the dorsum is an outwardly oblique greyish fuscous shade, rising to a little above the fold; a slight clouding of the same colour appears at the commencement of the costal and dorsal cilia respectively, the anteternal portion of the wing beyond it being slightly paler than the general hue; cilia brownish cinereous. *Exp. al.* 18 mm. *Hindwings* greyish brown; cilia pale brownish cinereous. *Abdomen* greyish brown, with a shining, pale cinereous patch at the base. *Legs* greyish brown, with pale cinereous tarsal annulations.

*Type* ♀ (65720, *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*). [PT. (5837 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*)—PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Three specimens.

Most nearly allied to 5702 *rhoifrutella* Clms., but distinct. The Tabernilla specimen shows that when comparatively fresh the ground-colour is slightly darker than in those from which the description was taken.



#### 4. *Anacampsis conistica*, sp. n.

*Antennae* brownish cinereous, dusted with black above. *Palpi* dull white, the median joint distinctly dark brown from its base on the outer side to beyond half its length, the dark brown abruptly cut off; the terminal joint brown on its outer side and around its extreme apex. *Head* greyish brown, face paler. *Thorax* slightly darker than the head. *Forewings* brownish cinereous, much suffused with fuscous, becoming tawny towards the apex and termen, a small black spot at the extreme base of the costa; four very indistinct fuscous spots, two on the fold, and two on the cell, of which the first discal is beyond the second plical; a dull brownish ochreous spot, at the commencement of the costal cilia, connected with an even more obscure opposite dorsal spot by a scarcely distinguishable line of pale scales, outwardly bowed among the fuscous suffusion; a few blackish scale-spots around the apex and termen, at the base of the greyish fuscous cilia which are minutely sprinkled along their middle with whitish cinereous, and faintly tipped with brownish ochreous; the apex is not greatly depressed, but somewhat obtuse. *Exp. al.* 14–15 mm. *Hindwings* scarcely broader than the forewings, trapezoidal, not indented; greyish brown; cilia tawny brownish grey. *Abdomen* brownish fuscous. *Legs* cinereous, suffused on their outer sides with tawny fuscous.

*Type* ♂ (35711, *Sonora*) Mus. Wlsm. [*PTT.* (35712–3) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*): DURANGO: Presidio (*Forrer*). Three specimens.

This species is very close to 5702 *rhoifructella* Clms., from some varieties of which it may possibly be undistinguishable by the colour or markings of the wings, but so far as I am at present aware the palpi of *rhoifructella* are smoother, less densely clothed, and suffused at least to the apex of the median joint with the darker shading, which is never abruptly cut off leaving the apex cleanly whitish, as in the Mexican species here described.

#### 5. *Anacampsis quinquepunctella* Wlsm. (Tab. I. fig. 35.)

*Anacampsis quinquepunctella* Wlsm. Pr. Z. Soc. Lond. 1897 80–1 no. 61 (1897)<sup>1</sup>.

*Type* ♂ (65179) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65181) US. Nat. Mus.]

*Hab.* AMERICA, C-I. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). West Indies—GRENADA: Balthazar, windward side, 5–15 IV. (*H. H. Smith*)<sup>1</sup>.

A single specimen of this species (65710) was received from Teapa.

#### 6. *Anacampsis ursula*, sp. n.

*Antennae* brownish grey. *Palpi* cinereous, the short median joint somewhat widened, shaded with greyish fuscous externally nearly to its apex, terminal joint very long, slender, recurved. *Head* mouse-grey; face shining cinereous. *Thorax* mouse-grey, with greenish and violet iridescence. *Forewings* with the costa straight, the apex depressed and somewhat angular; mouse-grey, sprinkled with greyish fuscous scales, a minute fuscous spot at the extreme base of the costa; from the commencement of the costal cilia an indistinct narrow pale cinereous and somewhat sinuate band, curving outward to below the middle, reverts to the dorsum before the tornus, beyond it the apical and terminal space is cupreous, with a slight iridescent lustre; cilia dull brownish cinereous, a few fuscous scales at their base around the apex. *Exp. al.* 18 mm. *Hindwings* dark brown, somewhat thinly scaled toward base; cilia brownish cinereous. *Abdomen* flattened; greyish brown. *Legs* cinereous, much shaded with greyish brown.

*Type* ♂ (65746) Mus. Wlsm. (*Godm-Salv. Coll.*). [*Type* ♀ (65772) US. Nat. Mus.]

*Hab.* MEXICO: MCRELOS: Cuernavaca, VI. (*H. H. Smith*). Two specimens.

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Very similar to 5702 *rhoifructella* Clms., but at once separable by the widened clothing of the median joint of the palpi.

7. **Anacamptis rhabdodes**, sp. n. (Tab. I. fig. 30.)

*Antennae* pale whitish ochreous, minutely annulate with blackish. *Palpi* slender, terminal joint longer than the median which is clothed above toward its base; whitish cinereous, the basal joint blackish externally to within one-third of the apex. *Head* and *Thorax* fawn-ochreous. *Forewings* pale olivaceous ochreous, transversely and narrowly striate with lines of dark fuscous scales beyond the base to the end of the cell, a minute blackish dot at the extreme base of the costa; a triangular dark fuscous costal shade-spot, before the costal cilia, is followed by a pale cinereous sinuate line, crossing the wing to the tornus; a few fuscous dots surround the apex and termen at the base of the pale brownish ochreous cilia. *Exp. al.* 13 mm. *Hindwings* a little broader than the forewings, trapezoidal; on the underside, below the costa near the base, is a slight tuft of long brownish scales; greyish brown; cilia pale brownish cinereous. *Abdomen* greyish brown. *Legs* brownish fuscous externally, the inner sides of the hind tibiae pale cinereous, with a faint indication of pale rings around the tarsal joints.

*Type* ♂ (65705) Mus. Wlsm. (Godm-Salv. Coll.).

*Hab.* MEXICO: TABASCO: Teapa, III. (H. H. Smith). Unique.

8. **Anacamptis molybdina**, sp. n.

*Antennae* pale brownish cinereous, shaded with greyish above. *Palpi* shining, pale brownish cinereous, with a fuscous patch at the base; terminal joint longer than the median, both smooth. *Head* and face shining, pale slaty grey. *Thorax* shining, purplish grey. *Forewings* shining, purplish grey, with an inwardly diffused transverse fascia on the outer third, angulated outward about its middle and bounded along its outer edge by an indistinct narrow pale line, beyond which, after a slight purplish shade, the remainder of the wing to the apex is slaty grey, rather paler than the basal part; around the termen and around the depressed obtusely angulated apex runs a blackish line at the base of the pale slaty grey cilia. *Exp. al.* 14 mm. *Hindwings* brown; cilia pale brownish cinereous. *Abdomen* greyish brown; anal tuft whitish cinereous. *Legs* greyish cinereous.

*Type* ♂ (65730) Mus. Wlsm. (Godm-Salv. Coll.). [PT. (65731) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Three specimens.

Closely allied to *fragariella* Busck, and of about the same size, but with slightly narrower forewings; it is of a more slaty colour and the fascia as well as the ante-terminal line are darker and more clearly defined.

9. **Anacamptis campalea**, sp. n.

*Antennae* stone-grey; slightly serrate towards the apex. *Palpi* dull stone-whitish. *Head* and *Thorax* stone-grey. *Forewings* stone-grey, with an upright, slightly oblique, dark chocolate dorsal patch near the base, preceded by two small spots of the same at the base, one costal, the other median; on the cell is a slight brownish spot at about half the wing-length, followed by a minute reduplicated spot at the end of the cell; a dark chocolate-brown patch at the apex is preceded by an oblique stone-white costal streak, traceable to the dorsum, but outwardly angulated on the middle where it sends out two slender branch-lines towards the termen, ending in small brown spots; cilia stone-grey. *Exp. al.* 15 mm. *Hindwings* greyish brown; cilia stone-grey. *Abdomen* dark brownish grey. *Legs* dark stone-grey, with pale whitish ochreous tarsal and tibial annulations.

*Type* ♂ (65747) Mus. Wlsm. (Godm-Salv. Coll.). [PT. (65748) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Tierra Colorada, 2000 ft., X. (H. H. Smith). Three specimens.

Very similar to *episema* Wlsm., but the palpi are uniformly dull stone-whitish, the median joint not being transversely striate with black as in that species.

10. **Anacampsis episema**, sp. n. (Tab. I. fig. 34.)

*Antennae* brownish fuscous, with faint paler annulations. *Palpi* silvery white at the base, with minute transverse black strigulae around the upper half of the smoothly clothed median joint; terminal joint longer than the median, whitish, peppered on its outer side with minute black scales. *Head* and face coarsely clothed with wide subspatulate scales; brownish cinereous above, becoming silvery white on the face, with opalescent reflections. *Thorax* brownish cinereous, with a pair of dark umber-brown spots anteriorly and smaller ones on the tegulae. *Forewings* with the costa straight, apex depressed, obtuse, termen obliquely rounded; brownish cinereous, with darker umber-brown sprinkling and some ill-defined spots of the same, two on the cell and one in the fold, also two small ones below the costa on the basal fifth; arising from the flexus, and narrowly connected with the base along the margin, is a dark umber-brown streak running somewhat obliquely outward, its upper extremity crossing the fold; a strong shade of the same colour along the costa, beyond the middle, is abruptly terminated by a dull ivory-white streak descending from the costa before the apical cilia, angulated inward above, and outward about the middle of the wing-length, and descending to the tornus; the terminal and apical space beyond it also dull ivory-white, with some greyish fuscous suffusion; a blackish triangular spot above the apex and two narrow transverse black lines below it preceding the pale whitish cinereous cilia, through which runs a dark dividing shade-line. *Exp. al.* 15–16 mm. *Hindwings* (1+) dark brownish fuscous; cilia tawny grey. *Abdomen* brownish fuscous. *Legs* whitish cinereous, broadly banded externally with brownish fuscous to the ends of the tarsi.

*Type* ♂ (65737, *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*). [PTT. (68760–1) US. Nat. Mus.]

*Hab.* AMERICA, C-S. **Central America**—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). **South America**—COLOMBIA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*)—BRAZIL, S.: PARANA: Castro, 1898 (*E. D. Jones*). Seven specimens.

Only single specimens from Atoyac and Castro; all agree in the peculiarly marked zebrate palpi which at once separate this species from *campalea* Wlsm.: the Castro specimen (♂ 67305) differs slightly in the flexal streak being broken into spots, the discal spots are perhaps also slightly more distinct.

11. **Anacampsis zebrina**, sp. n.

*Antennae* slightly biserrate; delicately annulate with fuscous and whitish ochreous. *Palpi* slender, recurved, smooth, the median joint fuscous, beautifully striate with delicate whitish lines transversely; the terminal joint whitish ochreous, with a slender dark line beneath. *Head* stone-grey; face whitish. *Thorax* fuscous, with whitish ochreous lines along the margins of the tegulae. *Forewings* fuscous nearly to the middle, whitish ochreous blending into fawn-brown beyond; the basal portion is largely reticulated with whitish ochreous lines forming three larger and some smaller dark patches; on the outer third of the wing is a fuscous costal patch followed by an inwardly oblique whitish line, traceable to the dorsum, in an angulated series of whitish scales; an elongate whitish patch at the end of the cell between this and the apex; above the patch is an elongate fuscous streak, and below it two fuscous lines following the nervules; around the apex and termen a whitish ochreous line is followed throughout its course by a dark fuscous line at the base of the fawn-brown cilia. *Exp. al.* 13 mm. *Hindwings* brownish fuscous; cilia slightly paler. *Abdomen* brownish fuscous. *Legs* whitish ochreous, the tarsi of the first two pairs, and the tibiae and tarsi of the third pair, banded externally with fuscous, the anterior bands oblique.

*Type* ♂ (65699) Mus. Wlsm. (*Godm-Salv. Coll.*). [PT. (65700) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Two specimens.

## 12. *Anacamptis scutella* Z.

*Gelechia* (*Ceratophora*?) *scutella* Z. Hor. Soc. Ent. Ross. 13 363-5 no. 22 Pf. 5-123 (1877)<sup>1</sup>.

Type ♀ (*Sommer Coll.*) Mus. Stgr.

*Hab.* [Central America?]

Zeller described this species from a single ♀ "ohne Angabe des Vaterlandes, das aber wohl auch das wärmere Amerika ist, aus der Sommerschen Sammlung im Museum Staudinger"<sup>1</sup>. This species probably came from some Central American locality, and appears to be closely allied to *zebrina* Wlsm., with which it agrees in the form of the palpi, as also with *episema* Wlsm. Similar zebrate palpi occur in some of Walker's South American species, and are not confined to the genus *Anacamptis* (cf. *Apopira falcatella* Wkr. etc.).

## 13. *Anacamptis titanota*, sp. n. (Tab. I. fig. 32.)

*Antennae* cinereous, suffused and banded with blackish above. *Palpi* ivory-white, slightly smeared with blackish at the end of the median joint, and along the outer surface of the terminal to the apex; both joints slender and smooth, terminal longer than median. *Maxillaries* and *Haustellum* ivory-white. *Head* and *Thorax* olivaceous grey; face and pectus ivory-white. *Forewings* ivory-white, the pale ground-colour fully exposed only along the costa from the base to two-thirds, and in a broad median band on which black shading and sprinkling of scales more or less encroaches from the base, and brownish fuscous shading, which covers the apical fourth, tends to encroach on its outer side; a small black dot at the extreme base of the costa is followed by two larger ones in the whitish space below the costa; resting on the upper edge of the black suffusion an indistinct ocelloid spot lies at the end of the cell, and beyond it a slender whitish line passes somewhat obliquely through the brownish terminal suffusion from costa to tornus; two or three small whitish length-streaks, combined with some black scales, running outward beyond it toward termen and apex; there is a slender blackish line along the base of the tawny brown cilia. *Exp. al.* 13 mm. *Hindwings* dark tawny brown; cilia smoky fuscous, tipped with pale cinereous. *Abdomen* tawny brown. *Legs* ivory-white, broadly banded with tawny black above.

Type ♂ (65750) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* GUATEMALA: VERA PAZ: Panima, X. 1879 (*G. C. Champion*). Unique.

## 14. *Anacamptis succincta*, sp. n. (Tab. II. fig. 1.)

*Antennae* pale brownish. *Palpi* smooth, recurved, the terminal joint as long as the median; white, shaded with brownish towards their apex. *Head* and *Thorax* pale brownish grey; face white. *Forewings* elongate, narrow, the costa straight, apex acuminate, slightly depressed, termen very oblique; pale brownish grey, indistinctly spotted with brownish fuscous, of which there is a slender streak along the base of the costa, an elongate spot on the middle of the cell, another in the fold preceding it, and one at the base of the dorsum; on the outer third of the wing a transverse brownish fuscous shade, especially conspicuous on the costa, follows the outline of a narrow whitish cinereous fascia, sharply angulated outward at its middle; beyond this the terminal area is pale cinereous, outlined with darker shading, most conspicuous on the costa before, and on the termen below the apex; cilia pale cinereous. *Exp. al.* 8.5 mm. *Hindwings* (1+) trapezoidal, termen subsinuate; brownish grey, cilia concolorous. *Abdomen* brownish grey. *Legs* (hind legs broken).

Type ♂ (65709, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*). [PTT. (76304, 76373) US. Nat. Mus.]

*Hab.* AMERICA, C-I. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). West Indies—JAMAICA: ST. ANDREW: Constant Springs, 24.XII – 2.I. 1905 (*Wlsm.*): ST. ANN: Moneague, 7-10. I. 1905 (*Wlsm.*); Runaway Bay, 3.III – 21.IV. 1905 (*Wlsm.*). Eight specimens.

15. *Anacamopsis elephas*, sp. n.

*Antennae* brownish cinereous. *Palpi* strongly recurved, smooth, terminal joint longer than median; greyish white, the basal third of the median joint fuscous externally. *Head* and *Thorax* leaden grey; face paler. *Forewings* leaden grey, with a black dot at the extreme base of the costa; a brownish fuscous shade-band crossing the wing at two-thirds, its inner edge somewhat produced along the costa, its outer margin marked by an angular whitish line, bent inward below the costa, outward to the middle of the wing, and thence obliquely inward to the dorsum where it terminates in a small buff-brown spot, a few brownish scales are scattered along its outer edge; around the apex and termen is a series of somewhat diffused brownish fuscous spots; cilia leaden grey, slightly mottled. *Exp. al.* 15 mm. *Hindwings* (1+) trapezoidal; pale greyish brown; cilia scarcely paler. *Abdomen* greyish brown, a small buff-brown spot above before the anal tuft. *Legs* brownish grey, the hind tarsi shaded externally with greyish fuscous.

*Type* ♂ (65727, *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65726 ♀) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo (*G. C. Champion*). Two specimens.

16. *Anacamopsis glaphyra*, sp. n. (Tab. I. fig. 31.)

*Antennae* pale cinereous, delicately annulate with fuscous. *Palpi* smooth, recurved, pale cinereous, the terminal joint longer than the median, reaching above the vertex, a slight fuscous shade along its under-side. *Head* and *Thorax* olivaceous leaden grey; face slightly paler. *Forewings* olivaceous leaden grey, with a fuscous dot close to the base of the cell, a slightly oblique dorsal streak at about one-sixth, extending across the fold, brownish fuscous, margined on either side with rich ferruginous scales; an obscure dot in the fold beyond its middle is followed by a discal dot above it, and another at the end of the cell; a rich ferruginous band crosses the wing at the commencement of the cilia, its upper and lower extremities shaded obliquely inward with dark brown; a series of small fuscous spots around the termen and apex at the base of the glaucous cilia, which are tipped with pale cinereous. *Exp. al.* 12 mm. *Hindwings* broader than the forewings, trapezoidal; dark brown; cilia pale cinereous. *Abdomen* dark brown. *Legs* pale cinereous, the tarsi with four fuscous bands of diminishing width.

*Type* ♂ (65738) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

This species is closely allied to *susceptella* Wkr. (Cat. Lp. BM. 29 615 no. 275, Ega), but differs in the dark marginal row of spots before the pale termen, and in the broader and paler hindwings.

17. *Anacamopsis siderophaea*, sp. n.

*Antennae* cinereous, faintly annulate with brownish. *Palpi* cinereous. *Head* and *Thorax* greyish cinereous. *Forewings* greyish cinereous, profusely sprinkled throughout with whitish cinereous scales, leaving an ill-defined triangular umber-brown costal spot beyond the middle, with a shade of the same colour on the outer portion of the fold, and a straight umber-brown terminal band including the apex, preceded on the costa by an obscure pale ochreous spot; cilia cinereous, shaded with umber-brown towards their base. *Exp. al.* 11–15 mm. *Hindwings* dark umber-brown; cilia paler. *Abdomen* dark umber-brown. *Legs* umber-brown, the hind tibiae whitish cinereous on their inner sides, with two whitish cinereous bands externally above the pale spurs; hind tarsi with four whitish annulations.

*Type* (♂ 65722; ♀ 65723, *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65701) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*). Four specimens.

18. *Anacamptis ambusta*, sp. n. (Tab. I. fig. 33.)

*Antennae* greyish brown. *Palpi* white, the terminal joint with a greyish tinge. *Head* greyish brown; face whitish. *Thorax* brown, slightly streaked with hoary scales. *Forewings* dark brown, the basal portion much mottled with hoary white, forming a patch on the costa reaching to one-fourth; a white spot lies at the end of the cell and the dark brown ground-colour is somewhat abruptly terminated in a straight line across the wing from the commencement of the costal cilia, the apical portion being thence equally sprinkled with dark brown and hoary white, the latter forming a streak in the costal cilia; apical and terminal cilia at their base reddish brown, dark brown along their middle, and brownish cinereous at their outer ends. *Exp. al.* 10 mm. *Hindwings* dark greyish brown, cilia somewhat paler. *Abdomen* shining bronzy brown. *Legs*, the median pair with strong spreading white tufts at the ends of the tibiae, a black patch at the base of the tuft externally, the tarsi whitish beneath, coppery brown above; hind legs greyish externally, whitish on their inner sides, the tarsi and hinder ends of the tibia spotted with white.

*Type* ♂ (65706, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PTT.* (68755-6) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—MEXICO: TABASCO: *Teapa*, III. (*H. H. Smith*). South America—COLOMBIA: *Minca*, 2000 ft., VI. 1899 (*H. H. Smith*). Eight specimens.

This species was described from a single specimen from Mexico; the subsequent reception of a small series from Colombia extends the distribution.

19. *Anacamptis metadupa*, sp. n.

*Antennae* cinereous. *Palpi* very slender, rising high above the vertex, terminal joint longer than median; pale cinereous. *Head* and *Thorax* dull brownish cinereous. *Forewings* with olivaceous greenish and bronzy brownish reflections; a broad plumbeous band near the base, running obliquely outward from dorsum to costa, is narrowly reduplicated beyond; from the middle of the dorsum arises a similar plumbeous band, which, attaining the costa obliquely before the cilia, is margined on its inner side by a somewhat triangular brownish fuscous costal spot, and on its outer side by a dorsal shade of the same colour; a triangular patch enclosing the apex and termen, with a dark line running through the middle of the cinereous terminal cilia, is also dark brownish fuscous, and is margined on its inner side by a pale cinereous line. *Exp. al.* 11-12 mm. *Hindwings* dark chocolate-brown; cilia pale cinereous, with a dark line running through them near their base, and a dark fuscous fan-like flexal tuft of scales. *Abdomen* brownish fuscous, mixed with cinereous, a plumbeous band across the middle. *Legs* dark fuscous, with three conspicuous whitish bands around the tibiae, and two on the tarsi.

*Type* ♂ (65702) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65704) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: *Teapa*, III. (*H. H. Smith*). Three specimens.

20. *Anacamptis perinaeta*, sp. n.

*Antennae* dark stone-grey. *Palpi* with a slight brush on the median joint above; white. *Head* and *Thorax* dark stone-grey; face white. *Forewings* stone-grey to half their length, thence dark bronzy brown; on the basal half, in certain lights, a slight greenish iridescence is visible; on the outer half are several snow-white streaks, one forming an oblique costal spot beyond the middle, a second small straight triangular spot before the commencement of the costal cilia, and a third above the tornus, divided by a dark line into two longitudinal streaks; in addition to these is an oblique apical streak, reduplicated in the apical cilia, a small length-streak below the outer end of the fold, and a shorter diverging streaklet above it; cilia shining, pale aeneous, with a dark line along their base. *Exp. al.* 9 mm. *Hindwings* umber-brown; cilia slightly paler. *Abdomen* bronzy brownish. *Legs* dark brownish, with white annulations on the tarsal joints and on the extremities of the tibiae.

*Type* ♂ (65728) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65729) US. Nat. Mus.]



*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

Closely allied to 5713 *levipedella* Clms., but differing in the presence of a white apical spot, reduplicated in the cilia.

## 21. *Anacamopsis suffectella* Wkr. (Tab. II. figs. 2, 3.)

*Gelechia suffectella* Wkr. Cat. Lp. BM. 29 610-11 sp. 266 (1864)<sup>1</sup>.

*Antennae* dull ochreous, faintly annulate with fuscous, the apex white. *Palpi* whitish, metallic. *Head* steel-blue, face paler. *Thorax* steel-grey, with a shining bluish tinge. *Forewings* bright orange, with a short basal patch, a costal triangle, before the middle, reaching to the fold, and a large apical patch—all dark tawny fuscous, margined, except on the costa, by broken smaller patches of bright, shining steel-blue; a conspicuous patch of the same shining steel-blue, edged with dark fuscous, lies in the centre of the triangular orange area, between the dark costal and apical patches; cilia pale greyish; underside with a slender whitish line along the costa. *Exp. al.* 9-10 mm. *Hindwings* brownish fuscous; cilia scarcely paler. *Abdomen* brownish fuscous; whitish beneath. *Legs* dark fuscous, the spurs and joints silvery white, the hind tarsi also with silvery annulations.

*Type* ♂ (1858: 6, *Ega*) Mus. Br. [*Tt.* (65714-5), (5838 Wlsm. Det.) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). South America—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*)—BRAZIL<sup>1</sup>: AMAZONS<sup>1</sup>: *Ega* (*H. W. Bates*)<sup>1</sup>: CEARA: VIII. 1884 (*J. H. Leech*): ESPIRITO SANTO: (1871, *Higgins*)—PERU: CUZCO: Cuzco Mts. (*Garlepp, Stgr.* 1895).

The specimen figured Tab. II. fig. 2 was originally regarded as distinct from *suffectella* Wkr., chiefly from the absence of any dark dusting on the orange ground-colour, such as exists to a limited extent on Walker's type, and more conspicuously on another of my own (♂ 65711) which had been compared with it. A fair series of *suffectella* has now been put together, and I am unable to regard the black dusting (which, by the way, does not appear to have caught the eye of the artist) as more than a varietal difference, although in some specimens it is quite conspicuous.

## 22. *Anacamopsis trochilea*, sp. n.

*Antennae* greyish brown. *Palpi* whitish at the base, becoming greyish brown along the terminal joint. *Head* brilliant metallic shining green; face white. *Thorax* dark brownish fuscous, with a bright green metallic spot posteriorly, the tegulae bright shining metallic green; shining white beneath. *Forewings* dark brownish fuscous, with a broad outwardly curved blue-green metallic band near the base, a slightly oblique stone-grey fascia across the middle, somewhat produced inwards on the dorsum, a triangular costal spot of the same colour between this and the metallic band, the termen, apex and cilia also stone-grey. *Exp. al.* 12 mm. *Hindwings* brownish fuscous, with a dark fuscous spot at the flexus; cilia stone-grey. *Abdomen* brilliant metallic shining green, with two brownish fuscous transverse bands, the second immediately before the stone-grey anal tuft; shining white beneath. *Legs* white, with two brownish fuscous spots on the hind tibiae.

*Type* ♂ (65707) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.\* [*PT.* (65708) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Two specimens.

\* [The Walsingham Collections were transferred to the British Museum 1st April, 1910.—JNO. HARTLEY DURRANT.]



Smaller than *perlatella* Wkr. [Cat. Lp. BM. 29 612 sp. 269 (1864) Ega; n. syn. = *smaragdullella* Wkr. Cat. Lp. BM. 29 614 sp. 273 (1864) Santarem], and in the material before me the stone-grey costal spot of *trochilea* is of moderate size and inconspicuous, while in *perlatella* it is produced to the dorsum as a fascia; moreover, the apical and terminal cilia of the forewings, as well as the cilia of the hindwings, are decidedly paler, and the apex of the forewing itself partakes in some degree of the grey tinge of the cilia which is certainly not the case in *perlatella*. A perhaps even more reliable difference is to be found in the form of the dark brown colouring which precedes the pale median band—in *perlatella* this encroaches outward towards the costa, throwing an acute point along the costa to two-thirds, whereas in *trochilea* this is much more abruptly terminated on the costa at about the middle.

The type of *secundella* Wkr. [Cat. Lp. BM. 29 615 sp. 274 (1864) Ega] which has almost entirely lost (in its present condition) the metallic colouring, described in somewhat similar terms to that of *perlatella* (= *smaragdullella*), approaches perhaps more nearly to the Mexican *trochilea* Wlsm. than the other two types, in that the apex and cilia are slightly grey, and the oblique dark band rather more abruptly terminated on the costa; but in *secundella* this band does not recede towards the base along the dorsum as in *trochilea*, while like *perlatella* it is a rather larger and stouter species, and the hind tarsi of *secundella* are white. Were it in good condition it would, I think, be more easy to separate it.

### 23. *Anacamptis speciosella* Wkr.

*Gelechia speciosella* Wkr. Cat. Lp. BM. 29 613 sp. 271 (1864)<sup>1</sup>.

*Antennae* dark brown, white at the apex. *Palpi* shining aeneous. *Head* and *Thorax* iridescent peacock-blue; face aeneous. *Forewings* rich dark brown, with a metallic bluish spot at the extreme base of the costa, and five snow-white spots—one costal, at two-thirds of the wing-length; one dorsal, at three-fourths; one on the disc, before the middle; one at the lower angle of the cell; and one below the fold, nearer to the base; cilia dark brownish fuscous, snow-white on the middle of the termen. *Exp. al.* 12–13 mm. *Hindwings* and cilia dark brownish fuscous. *Abdomen* shining, iridescent, dark greyish green. *Legs* dark brown, banded on the tibiae and tarsi with snow-white; spurs snow-white.

*Type* ♀ (1857:20) Mus. Br.; ♂ (65754) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*Htt.* (65756–7) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—GUATEMALA: VERA PAZ: Cubilguitz (*G. C. Champion*)—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft. (*G. C. Champion*). South America—BRAZIL: AMAZONS: Ega (*H. W. Bates*)<sup>1</sup>.

Closely allied to *stelliferella* Wkr. [Cat. Lp. BM. 29 613 sp. 270 (1864)], with which it agrees in the number of white spots in the forewings. These amount to five in both species, although Walker only recognised four in the type of *stelliferella*, where he evidently overlooked the linear one in the fold which precedes the first costal: *speciosella* differs however consistently in the presence of a conspicuous white spot in the apical cilia of the forewings which is not found in *stelliferella*.

24. *Anacampsis* (??) *veteranella* Z.

*Gelechia* (*Tachyptilia*) *desectella* Z. Hor. Soc. Ent. Ross. **13** 361-2 sp. 21 Pf. 5 · 121 (1877) <sup>1</sup>.

*Hab.* [Central America?]

If the figure is in any way reliable this species cannot be an *Anacampsis* Crt. (= *Tachyptilia* Hnmn.), but would appear to belong to the narrow-winged *Gelechiadiae*. We are unacquainted with the species which is represented in Staudinger's collection by nine specimens from the "Sommer'schen Sammlung ohne Angabe des Vaterlandes, das aber doch wohl das wärmere Amerika" <sup>1</sup>.

## EVIPPE Chmb.

Type 1: *Evippe prunifoliella* Chmb. (Chmb. 1873).

EVIPPE Chmb. Can. Ent. **5** 185-6 (1873); Busck Bull. US. Nat. Mus. **52** 500 sp. 5593-4 (1902): Pr. US. Nat. Mus. **25** 772, 805-6 Pf. **29** · 13 (1903): **30** 725 tf. 725 · 3 (1906).

Type 2: *Gelechia* (*Teleia*?) *leuconota* Z. (= *plutella* Chmb.; Chmb. 1875).

§ *PHAETUSA* Chmb. Can. Ent. **7** 105-7 (1875): Bull. US. GG. Surv. **4** 160 (1878); Busck Pr. US. Nat. Mus. **25** 805-6 (1903).

1. *Evippe leuconota* Z.

= *plutella* Chmb. <sup>11-12</sup>.

*Gelechia* (*Teleia*?) *leuconota* Z. Verh. ZB. Ges. Wien **23**: 1873 Abh. 268-9 Pf. **3** · 21 (1873) <sup>1</sup>. *Phaetusa plutella* Chmb. Cat. Ent. **7** 105-7 (1875) <sup>2</sup>. *Gelechia leuconota* Chmb. Bull. US. GG. Surv. **4** 144 (1878) <sup>3</sup>. *Phaetusa plutella* Chmb. Bull. US. GG. Surv. **4** 160 (1878) <sup>4</sup>: Can. Ent. **10** 53-4 (1878) <sup>5</sup>; Wlsm. Tr. Am. Ent. Soc. **10** 177 (1882) <sup>6</sup>; Mrtf. Can. Ent. **15** 94 (1883) <sup>7</sup>. *Gelechia leuconota* Hgn. Pap. **4** 99 (1884) <sup>8</sup>; Riley, Smith's List Lp. Bor-Am. 103 sp. 5401 (1891) <sup>9</sup>. *Phaetusa plutella* Riley, Smith's List Lp. Bor-Am. 103 sp. 5512 (1891) <sup>10</sup>. *Evippe leuconota* Busck Bull. US. Nat. Mus. **52** 500 sp. 5594 (1902) <sup>11</sup>: Pr. US. Nat. Mus. **25** 806 Pf. **29** · 13 (1903) <sup>12</sup>.

*Hab.* AMERICA, N-C. United States, E. <sup>12</sup>—KENTUCKY <sup>12</sup>—TEXAS <sup>1-12</sup>. Central America—MEXICO: SONORA: 1883 (*H. K. Morrison*).

A single specimen (35721) in poor condition, but lacking the white costal spot which distinguishes *prunifoliella* Chmb.

## RECURVARIA Hw.

= § *EVAGORA* Clms.; = *EIDOTHEA* Chmb.; = *SINOE* Chmb.; = *ANAPHAULA* Meyr.

Type 1: *Tinea nanella* S-D., Hb. (Hnmn. 1870).

RECURVARIA Hw. Lp. Br. 547-58 sp. 1-47 (1828); Hnmn. Schm. Deutsch. Tin. 189, 279-81 no. 423 sp. 416-7 (1870), Tbl. 41 no. 423 (1876); Stn. Ent. Mo. Mag. **7** 167-8 (1870);

Stgr Wk. Cat. Lp. Eur. 296 no. 199 sp. 1997-8 (1871); Snln. Vlind. Nederl. Micr. 429, 669-71 no. 45 sp. 1-2 Pf. 8·268-9 (1882); Stgr-Rbl. Cat. Lp. Pal. 2 155 no. 315 sp. 2873-4 (1901); Busck Bull. US. Nat. Mus. 52 500-1 sp. 5596-605 (1902); Pr. US. Nat. Mus. 25 772, 807-15 Pf. 29·15 (1903); 30 725-6 tf. 726·4 (1906); Can. Ent. 38 212 (1906); Ent. News 19 316-7 (1908); Splr. Schm. Eur. 2 356-7 no. 16 sp. 1-2 (1910).

Type 2: *Evagora apictripunctella* Clms. (Clms. 1860).

§*EVAGORA* Clms. Pr. Ac. Nat. Sc. Phil. 12 165-6 (1860); Clms-Stn. Tin. N-Am. x, 119-21 (1872); Wlsm. Tr. Am. Ent. Soc. 10 182 (1882); Pr. Z. Soc. Lond. 1897 63-6 sp. 21-6 (1897); Busck Pr. US. Nat. Mus. 25 807-9, 934 (1903); Pr. Ent. Soc. Wash. 5 200 (1903).

Type 3: *Gelechia* (*Teleia*?) *dorsivittella* Z. (= *vagatioella* Chmb.; Chmb. 1873).

*EIDOTHEA* Chmb. †*EIDOTHOA* Chmb. Can. Ent. 5 186-7 (1873). ‡*EIDOTHEA* Chmb. Can. Ent. 5 229-30 (1873). *EIDOTHOA* Busck Pr. US. Nat. Mus. 25 807-8, 812-3 (1903).

Type 4: *Anacampsis robiniella* Fitch (= *fuscopallidella* Chmb.; Chmb. 1873).

*SINOE* Chmb. Can. Ent. 5 229-231 (1873); Busck Pr. US. Nat. Mus. 25 807-8, 812-13 (1903).

Type 5: *Phalaena Tinea leucatella* Cl., L.

\**RECURVARIA* (Hw.) HS. SB. Schm. Eur. 5 11, 44 no. 71 Pf. 14·d (1853), 205-6 no. 71 sp. 573-4 (1854). *APHANAULA* Meyr. HB. Br. Lp. 569, 579-80 no. 7 sp. 1-2 (1895); Busck Pr. US. Nat. Mus. 25 807-8 (1903).

[\**RECURVARIA* (Hw.) Meyr. HB. Br. Lp. 569, 606-7 no. 17 sp. 1 (1895) = *ACOMPSIA* Hb. (Type *cinerella* Cl.; Dp. 1838) *vide* Wlsm. Pr. Z. Soc. Lond. 1897 82 no. 18 (1897).]

### 1. *Recurvaria rhicnota*, sp. n. (Tab. II. fig. 4.)

*Antennae* pale cinereous, annulated with dark brown. *Palpi* with the median joint somewhat densely clothed, not hirsute, terminal joint as long as the median, acuminate; whitish cinereous, with two broad bands of dark brown on each joint, the anteterminal band on the median joint narrower than the other three. *Head* whitish cinereous, sprinkled with dark brown. *Thorax* dark brown, sprinkled with pale cinereous. *Forewings* olivaceous brownish, with a slight ochreous tinge, profusely speckled with pale cinereous, especially on their basal half; with numerous dark brown spots and blotches, of which the more conspicuous are two costal on either side of the middle, one discal a little beyond the middle, one dorsal before the tornus, and three or four smaller marginal, around the apex; cilia brownish ochreous, with a shade of fuscous speckling running through their middle. *Exp. al.* 15 mm. *Hindwings* narrower than the forewings, slightly bisinuate below the apex; bronzy brownish grey; cilia (1½) brownish grey. *Abdomen* greyish brown. *Legs*, hind tibiae with brownish ochreous hairs above; the tarsi greyish brown, with four pale annulations.

*Type* ♀ (65784) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Las Mercedes, 3000 ft. (*G. C. Champion*). Unique.

Allied to 5598 *colubrinae* Busck.

### 2. *Recurvaria sartor*, sp. n. (Tab. II. fig. 7.)

*Antennae* black, with indistinct whitish annulations. *Palpi* recurved, median joint slightly roughened beneath, terminal nearly as long as median, slender; white, with two black annulations on the terminal,

and a few black scales on the outer side of the median. *Head* white. *Thorax* pale fawn-brownish. *Forewings* fawn-brownish, with a lilac tinge (possibly due to abrasion), the costa is slightly shaded along the basal half; there is a patch of black raised scales on the dorsum at one-fourth, partially connected by blackish scaling along the dorsum, with a second smaller but otherwise similar spot at about two-thirds; cilia fawn-brownish about the apex, with a slight speckled appearance, becoming pale brownish grey on the tornus and at the dorsum. *Exp. al.* 11 mm. *Hindwings* pale shining silvery grey; cilia pale brownish grey. *Abdomen* dark brownish grey. *Legs* whitish, with four black tarsal spots above.

*Type* ♂ (65792) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

A distinct species.

### 3. *Recurvaria thysanota*, sp. n. (Tab. II. fig. 5.)

*Antennae* somewhat stout; cinereous, with faint darker annulations. *Palpi* chalky-white, the median joint somewhat expanded on either side at its apex, shaded with brownish fuscous externally at its base; terminal joint about as long as the median, porrect, with two fuscous annulations. *Head* and *Thorax* chalky-white, the tegulae smeared with brownish fuscous. *Forewings* chalky-white, somewhat shaded and sprinkled with brownish fuscous; a dark brownish fuscous line on the base along the fold and another from the middle of the wing to above the apex are blended by brownish shading on the basal half of the cell; a small fuscous dot lies a little above the outer extremity of the fold, and there is another at the extreme apex; apical and subapical cilia whitish, sprinkled with brownish fuscous; tornal cilia unsprinkled, inclining to brownish ochreous. *Exp. al.* 10 mm. *Hindwings* nearly as broad as the forewings, oblique below the produced apex; ♂ with a conspicuous yellowish ochreous limbal hair-pencil; shining, pale steely grey; cilia brownish cinereous, with a slight ochreous tinge. *Abdomen* shining, steel-whitish. *Legs* whitish cinereous.

*Type* ♂ (65786) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

Most nearly allied to *juniperella* Krft. [Jr. N-Y. Ent. Soc. 11 153, 157-8 Pf. 9·3, 17 (1903)], but separable by the limbal hair-pencil, and the slightly different markings.

### 4. *Recurvaria flagellifer*, sp. n.

*Antennae* pale brownish fuscous. *Palpi* white, the median joint black nearly to its apex on the outer side, but not within nor above; terminal joint with two blackish annulations. *Head* and *Thorax* dirty whitish, the latter sprinkled with brownish fuscous. *Forewings* dirty whitish, profusely sprinkled with brownish fuscous, with numerous small spots of pale, slightly raised scales; the fuscous clouding tends to assume the form of oblique shades descending outward from the costa, but these are so confused and ill-defined that they do not constitute true bands or fasciae, nor do they reach the dorsum; the first of these is near the base and can be traced to the fold and a little beyond it; the second is a little before the middle, rather less oblique, but in some specimens more strongly marked than the first; the third consists mainly of a larger dark fuscous cloud before the commencement of the costal cilia, and opposite to this is a smaller patch on the dorsum, the terminal portion of the wing being also more or less suffused; cilia of the same colour as the wing-surface, with the same speckled appearance. *Exp. al.* 11-13 mm. *Hindwings* shining, pale greyish; cilia shining, brownish ochreous; ♂ with strong bright ochreous flexal hair-pencil. *Abdomen* brownish fuscous. *Legs* dirty whitish, with fuscous tarsal shade-bands.

*Type* ♂ (65777); ♀ (65778) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65779-80) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Seven specimens.

### 5. *Recurvaria sticta*, sp. n.

*Antennae* whitish ochreous, barred above with black beyond the rather thickened basal joint. *Palpi* whitish, the basal half of the median joint black on the outer side, with a small black spot before its apex; terminal joint with two black annulations. *Head* and *Thorax* whitish ochreous. *Forewings* whitish ochreous, minutely dusted with pale brown and some blackish scales, with numerous black spots around which the brownish dusting is rather more profuse; at the extreme base of the costa is a small reduplicated black spot, with another at the middle of the base beneath it; a black costal spot before the middle is followed by a larger one, somewhat quadrangular, beyond the middle, after which three small black dots along the base of the costal cilia are followed by an oblique black apical streak; a conspicuous outwardly oblique black dorsal patch arises immediately beyond the flexus, extending across the fold before its middle; there is a broken black streak along the outer half of the cell, a dorsal spot before the tornus, three or four small black spots along the termen, and one or two others just beyond the cell, enclosed by a faintly indicated whitish line, strongly bent outward, passing from the costal to the dorsal cilia; terminal cilia whitish ochreous, minutely dusted with black which forms a faint line running through them beyond their middle; dorsal cilia greyish ochreous; underside profusely shaded with fuscous. *Exp. al.* 10–12 mm. *Hindwings* pale bluish grey along the middle, the costa narrowly, the dorsum broadly tinged with brownish ochreous; underside sprinkled with fuscous along the costa, especially at the apex; cilia greyish ochreous. *Abdomen* pale ochreous. *Legs* pale ochreous, with conspicuous black tarsal annulations.

*Type* ♂ (65787) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65789–90) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Five specimens.

### 6. *Recurvaria picula*, sp. n. (Tab. II. fig. 6.)

*Antennae* white, with slender black annulations. *Palpi* white, the median joint moderately clothed, black at the base, with an olivaceous spot on its outer side toward its apex; terminal joint with two olivaceous brownish annulations. *Head* and *Thorax* white, the tegulae with a black spot at their base. *Forewings* white, slightly smeared with olivaceous brown between the black markings, which consist of four elongate costal spots—one at the base, forming the origin of an outwardly oblique black and brown fascia, in which some of the scales are slightly raised, reaching the dorsum at one-third from the base; one, scarcely before the middle, one beyond the middle, and a fourth, forming a somewhat broken patch, just before the apex; there is another mixed black and brownish spot on the dorsum before the tornus, while a little below each of the two middle costal spots is a black dot; terminal cilia whitish, mottled with olivaceous brownish; dorsal cilia grey. *Exp. al.* 10 mm. *Hindwings* grey; cilia grey, with a slight brownish tinge, especially at the termen. *Abdomen* grey. *Legs* white, smeared with grey on their outer sides.

*Type* ♂ (5978 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: VERA CRUZ: Cordova, II. 1908 (*F. Knab*). Unique.

### 7. *Recurvaria dorsivittella* Z.

=*vagatioella* Chmb.<sup>11–12</sup>.

*Gelechia* (*Teleia*?) *dorsivittella* Z. Verh. ZB. Ges. Wien 23:1873 267–8 Pf. 3·20 (1873)<sup>1</sup>. *Eidothoa vagatioella* Chmb. Can. Ent. 5 186–7 (1873)<sup>2</sup>. *Eidothea vagatioella* Chmb. Can. Ent. 7 105–6 (1875)<sup>3</sup>. *Gelechia dorsivittella* Chmb. Bull. US. GG. Surv. 4 143 (1878)<sup>4</sup>. *Gelechia vagatioella* Chmb. Bull. US. GG. Surv. 4 139, 147 (1878)<sup>5</sup>. *Gelechia dorsivittella* Hgn. Pap. 4 98 (1884)<sup>6</sup>; Riley, Smith's List Bor-Am. 101 sp. 5357 (1891)<sup>7</sup>. *Gelechia vagatiocella* Riley, Smith's List Bor-Am. 102 sp. 5505 (1891)<sup>8</sup>. *Aristotelia dorsivittella* Wlsm. Pr. Z. Soc. Lond. 1897 66 sp. 26 (1897)<sup>9</sup>; Dietz, Smith's Ins. N-Jers. 475 (1900)<sup>10</sup>. *Recurvaria dorsivittella* Busck Bull. US. Nat. Mus. 52 501 sp. 5603 (1902)<sup>11</sup>; Pr. US. Nat. Mus. 25 808, 813–4 (1903)<sup>12</sup>.

*Hab.* AMERICA, N-C-I. United States<sup>1-12</sup> — EASTERN STATES<sup>10-12</sup> — KENTUCKY<sup>2, 11, 12</sup> — TEXAS<sup>1, 6, 9, 11, 12</sup>. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). West Indies<sup>9</sup>—ST. CROIX: 6-14 V. (*Gudmann, Hedemann*)<sup>9</sup>.

A single specimen only (65785) received from Amula.

### EPITHECTIS Meyr.

Type 1: *Phalaena Tinea mouffetella* L. (Snln. 1882).

§ *BRACHMIA* Hnmn. Schm. Deutsch. Tin. 189, 230-3 no. 419 sp. 333-7 (1870), Tbl. 35 no. 419 (1876); Stn. Ent. Mo. Mag. 7 166 (1870); Stgr-Wk. Cat. Lp. Eur. 292 no. 195 sp. 1871-7 (1871); Snln. Vlind. Nederl. Micr. 430, 671-3 no. 46 sp. 1 Pf. 8 · 259, 271 (1882).

Type 2: *Gelechia lathyri* Stn.

EPITHECTIS Meyr. HB. Br. Lp. 569, 580-1 no. 8 sp. 1-2 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 154 no. 313 sp. 2850-8 (1901); Meyr. Pr. Linn. Soc. NSW. 29 259, 303-4 no. 14 sp. 78 (1904); Jr. Bomb. NH. Soc. 16 592 (1905); Busck Bull. US. Nat. Mus. 52 501-2 sp. 5608-13 (1902); Pr. US. Nat. Mus. 25 772, 816-9 Pf. 30 · 17 (1903); Splr. Schm. Eur. 2 356 no. 15 sp. 1-9 (1910).

Type 3: *Gelechia attributella* Wkr. (= *difficilisella* Chmb.; Chmb. 1873).

§ *TAYGETE* Chmb. Can. Ent. (4 192-3), 5 229-32 (1873); Busck Pr. US. Nat. Mus. 25 816-7 Pf. 30 · 17 (1903).

[*Taygete* Chmb. regarded as homonymous with *Taygetis* Hb. Verz. Schm. 55-6 (1816) Busck *l. c.*]

Type 4: *Parasia*? *subsimella* Clms. (Clms. 1860).

\**PARASIA* (? Dp.) Clms. Pr. Ac. Nat. Sc. Phil. 12 173 (1860); Clms-Stn. Tin. N. Am. x, 136-7 (1872); Busck, Pr. US. Nat. Mus. 25 816, 819, 934 (1903).

#### 1. *Epithectis lasciva*, sp. n. (Tab. II. fig. 8.)

*Antennae* ochreous, stained and obscurely annulate with blackish. *Palpi* ochreous, a black band before the apex of the median joint, a narrower one at the base, and another wider one before the apex of the terminal. *Head* dull ochreous, mixed with smoky fuscous scales. *Thorax* ochreous, with some black scaling posteriorly and on the tegulae. *Forewings* pale ochreous, with some streaky shades of darker brownish ochreous above and below the fold, along the cell, and beyond it; a short black streak, at the base, reaches nearly to the flexus, but does not actually touch the margin, and is followed by three, elongate, black costal spots, gradually increasing in size—the first near the base, the second before the middle, the third, and most conspicuous, beyond the middle; below each of the two latter are a few black dots, and beyond the last is a series of small marginal black spots running around the apex and termen; cilia ochreous dusted with smoky fuscous. *Exp. al.* 8.5 mm. *Hindwings* pale grey; cilia pale greyish ochreous. *Abdomen* greyish ochreous. *Legs* pale ochreous.

*Type* ♂ (5843 Wlsm. Det. 1908) US. Nat. Mus. [PT. (33607) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Two specimens.

#### 2. *Epithectis platysoma*, sp. n.

*Antennae* dull brown above, inclining to ochreous beneath. *Palpi* pale fawn-ochreous, blotched with dull brown on the outer side of the median joint to beyond the middle, as well as broadly around the base and narrowly before the apex of the terminal joint. *Head* brownish ochreous, face paler. *Thorax* dull



brown, posteriorly margined with ochreous. *Forewings* narrow, elongate, lanceolate towards the apex, the costa slightly arched towards the base; pale fawn-ochreous, with a short dull brown basal patch, a slightly oblique dark brown half-fascia at one-third from costa to fold, somewhat interrupted below its broad costal extremity; a shorter semi-fasciaform blotch of the same colour beyond the middle, not reaching to the fold in some specimens, but continued posteriorly to the dorsum in others, the apex and termen being also clouded with dull brown; cilia brownish ochreous, except on the costa where they partake of the colour of the brown apex. *Exp. al.* 18–21 mm. *Hindwings* much broader than the forewings, not incised below the apex; pale cinereous, with a slight ochreous tinge; cilia brownish ochreous. *Abdomen* flattened, with angular projections of scales at the sides of the segments; brownish ochreous, shading to brown posteriorly. *Legs* ochreous, shaded with brown externally.

*Type* ♂ (4714); ♀ (65879) Mus. Wlsm. BM. [PT. (4715) US. Nat. Mus.]

*Hab.* MEXICO: DURANGO: Milpas (*Forrer*): VERA CRUZ: Las Vegas, 8000 ft., 1887 (*W. Schaus*). Four specimens.

Closely allied to 5609 *bicostimaculella* Chmb., but differing in its larger size and more ochreous colouring, in the brownish ochreous cilia (especially of the forewings), which in the other species are white, in the prolongation of the first costal patch to or beyond the fold, and the inward expansion of the second costal patch on the cell.

### 3. *Epithectis critica*, sp. n. (Tab. II. fig. 9.)

*Antennae* blackish. *Palpi* white, the median joint black on its basal half externally. *Head* white. *Thorax* creamy white, the extreme base of the tegulae blackish. *Forewings* creamy ochreous, becoming more ochreous towards the apex, the costa blackish from the base to beyond the middle and profusely dusted with black towards the apex; a black dusted patch crosses the fold beyond its middle, not reaching the dorsum, and beyond this the apical portion of the wing is profusely dusted with black intermixed with whitish scales along the lines of the nervules; the cilia on the termen and apex are thickly peppered throughout their length with black scale-points, alternating with whitish ochreous. *Exp. al.* 9 mm. *Hindwings* narrower than the forewings, elongate, trapezoidal, somewhat angular below the projecting apex; pale grey; cilia brownish grey. *Legs* whitish ochreous, thickly peppered with black scaling externally on the tibiae and tarsi.

*Type* ♀ (65793) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

Very similar in size and appearance to 2856 *lathyri* Stn., the type of the genus *Epithectis* Meyr. It should be noted that neither of the two potential geneotypes of *Epithectis* agrees precisely with Meyrick's description: *lathyri* Stn. (like *critica*) having HW: 3–4 closely approximate, but not connate, while *mouffetella* S-D. has these veins stalked, not connate.

### AROGALEA, gen. n.

(ἀρωγός = expedient; ἄλεος = fulness.)

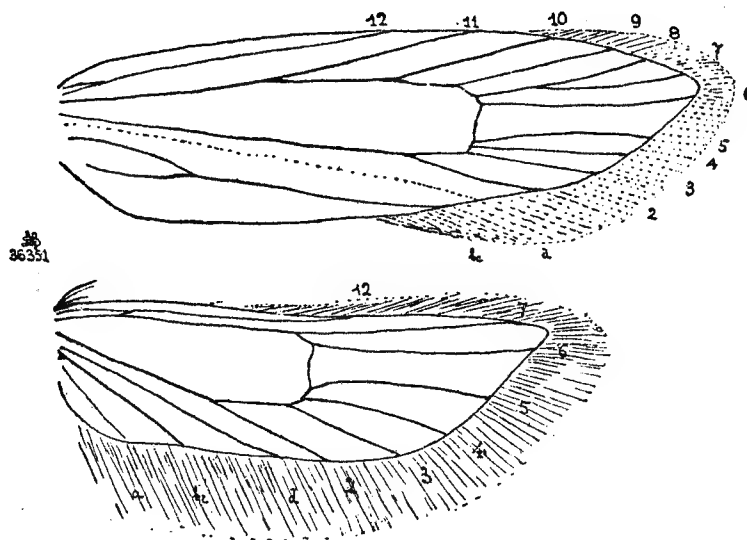
*Type*: *Gelechia cristifasciella* Chmb.

*Antennae*  $\frac{3}{4}$ , basal joint without pecten; ♀ simple. *Labial Palpi* recurved, acute; median joint somewhat thickened with rough scales beneath, terminal smooth. *Maxillary Palpi* short, converging. *Head* smooth, with large flat iridescent scales. *Thorax* smooth. *Forewings* elongate, with somewhat straightened costa, slightly depressed to the lanceolate apex, of even width thence to the flexus; with raised scales: *neuration* 12 veins; 7 and 8 stalked, to costa; 2–6 separate, 2 remote from 3. *Hindwings* 1, with oblique, but not incised termen: *neuration* 8 veins; 3 and 4 separate; 5 cubital; 6 and 7 separate, nearly parallel. *Abdomen* moderate. *Legs*, hind tibiae hairy above.





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12. *Arogalea cristifasciella* Chmb. ♀.

Nearest to *Telphusa* Chmb., from which it differs in having HW: 6-7 separate, and from *Leptogeneia* Meyr. [Pr. Linn. Soc. NSW. 29 257, 412-3 no. 47 (1904)] in the lack of the rough projecting tuft on the lower side of the palpi, as also in having FW: 2 remote from 3. Although not nearly related, *Arogalea* is liable to be confused in tabulations with *Aristotelia* Hb., owing to the separation of HW: 6-7. *Arogalea* differs in these veins not being truly parallel, in HW: 5 being bent towards 4 at base, and in the presence of raised scales in the forewings.

### 1. *Arogalea archaea*, sp. n. (Tab. II. fig. 10.)

*Antennae* white, delicately annulate with brown. *Palpi* white, the median joint slightly thickened, with a broad olive-brown band near the base, a narrower one near its apex; terminal joint with a narrow band near its base, a wide one at its apex. *Head* and face snow-white. *Thorax* white, dusted with olive-brown. *Forewings* white, profusely dusted with olive-brown, with many brownish fuscous spots and mottlings; a small one at the base of the costa is followed by another a little beyond it, a third lying below the base of the fold; a dorsal streak at about one-fifth crosses the fold upward and terminates on the cell; above and beyond this are two more spots, one on the costa, one below and beyond it; these are followed by a broad brownish fuscous costal blotch, beyond the middle, which merges at its lower end in an olive-brown median shade, and opposite to it is a scarcely smaller dorsal blotch, the apical portion of the wing being mottled throughout with brownish fuscous, mixed with olive-brown; cilia white, with lines of olive-brown dusting running through them, tornal cilia pale brownish cinereous. *Exp. al.* 13 mm. *Hindwings* (1) shining, pale grey; cilia brownish cinereous. *Abdomen* brownish cinereous. *Legs* pale brownish cinereous, the tarsal joints distinctly banded with fuscous.

*Type* ♂ (65794) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Unique.

### 2. *Arogalea senecta*, sp. n.

*Antennae* stout, greyish fuscous. *Palpi* white, with a broad blackish band at the base and a narrower one before the apex of the median joint; with two blackish bands around the terminal joint, one before, the other beyond the middle. *Head* and *Thorax* greyish white, sprinkled with dark fuscous. *Forewings* narrow, elongate, greyish white, with dark fuscous sprinkling throughout and black scale-patches, some of which are distinctly raised; a small raised black spot on the costa near the base, a larger black spot in and above the fold at about one-fourth, a distinctly raised black patch on and above the dorsum beneath it, accompanied by a few chestnut-brown scales, also raised; beyond this series of spots, which are more or less

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connected, a black costal spot occurs before the middle, with a curved black streak a little below and beyond it at the upper edge of the cell; this is succeeded by an inwardly oblique blackish cloud coming from the costa beyond the middle and almost connected with an opposite black dorsal spot, the latter narrowly produced outward and diffused nearly to the tornus; the apical portion of the wing thickly sprinkled with dark fuscous, a streak of the same running through the basal half of the cilia at the apex; cilia whitish grey, assuming an ochreous tint along the dorsum. *Exp. al.* 12 mm. *Hindwings* pale, shining, bluish grey; cilia ochreous grey. *Abdomen* shining, pale brownish ochreous. *Legs*: anterior pair barred with black and white; posterior legs whitish, the tarsal joints with blackish annulations.

*Type* ♂ (65797) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65798) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*). Two specimens.

### 3. *Arogalea albilingua*, sp. n.

*Antennae* white, with faint darker annulations. *Palpi* with strong sooty black patch at the base of the median joint, a small brown spot before the apex; with a black annulus near the base of the terminal joint and a wider one near its apex. *Haustellum* scaled with white at its base, showing somewhat conspicuously between the dark eyes and bases of the palpi. *Maxillary Palpi* short, whitish. *Head* shining, silvery white. *Thorax* white, faintly dusted with brownish fuscous. *Forewings* shining white, sprinkled with brownish ochreous and brownish fuscous scales; with five conspicuous black marginal spots, one of these at the base of the costa is reduplicated, the white ground showing between its extremities; a second costal spot, before the middle, is followed by a third beyond the middle, opposite to which and a little beyond it is a black dorsal spot of raised scales at the end of the fold; beyond this again is a speck of black scales on the termen a little above the tornus; another conspicuous black spot, with raised white scales intermixed, lies across the middle of the fold, a smaller similar spot on the cell about the middle of the wing; cilia white, with some greyish fuscous dusting along their base, becoming shining ochreous on the dorsum; underside fuscous. *Exp. al.* 10-10.5 mm. *Hindwings* pale steely grey; cilia shining, ochreous; underside pale rosy grey. *Abdomen* shining, pale greyish ochreous. *Legs* shining, whitish ochreous, the hind tarsi faintly spotted.

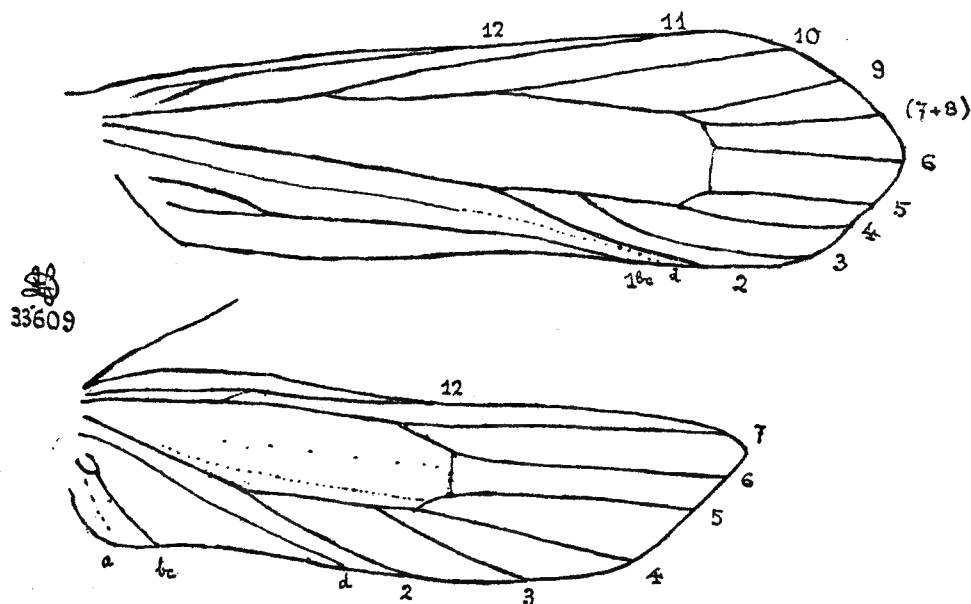
*Type* ♂ (65795) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65796) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

### ZELOSYNE, gen. n.

(ζηλοσύνη = emulation.)

*Type*: *Zelosyne poecilosoma* Wlsm. (Tab. II. fig. 11.)



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13. *Zelosyne poecilosoma* Wlsm. ♂.

*Antennae* simple; basal joint without pecten. *Labial Palpi* recurved; median joint with well-developed brush beneath; terminal joint slightly thickened by coarse scaling, longer than median. *Maxillary Palpi* short. *Haustellum* scaled. *Ocelli* absent. *Head* and *Thorax* smooth. *Forewings* with costa straight, dorsum parallel, apex considerably depressed, rounded: *neuration* 11 veins; 7-8 coincident, to costa; rest separate, 5-6 remote; 4 from angle, 3 remote from 4, nearer to 2. *Hindwings* trapezoidal, termen oblique, cilia 1+: *neuration* 8 veins; 6-7 separate, nearly parallel; 3-4 separate; 5 cubital; 11 connecting radius to 12. *Abdomen* smooth. *Legs*: hind tibiae slightly hairy.

A distinct genus, differing from *Arogalea* in the origin of FW:2-3, and the coincidence of 7-8.

### 1. *Zelosyne poecilosoma*, sp. n. (Tab. II. fig. 11.)

*Antennae* white, much stained with brownish on the basal half; basal joint white. *Palpi* white, median joint yellowish brown on the outer side to two-thirds; terminal joint white, a narrow band of pale brown at its middle. *Head* white. *Thorax* and tegulae yellowish brown, a large white spot posteriorly. *Forewings* shining, white, with yellowish brown markings; a short basal patch, wider on the costa than on the dorsum, where it does not reach the flexus, is narrowly edged outwardly with blackish scales; a central fascia, also slightly wider on the costa than on the dorsum, is narrowly edged before and behind with blackish scales; a patch of the same yellowish brown colour covers the apical portion of the wing including the tornus, this is slightly produced backward on the costa, nearly reaching the outer edge of the central fascia; it is narrowly edged with black on its inner side, and along the costa, above the greatly depressed apex, is an elongate patch of black scales, more or less diffused inward across the fascia, and clearly defined by a black line on its outer side, where it is followed by a rather broad line of yellowish brown before the cilia which are brown, with a slender white line along their base, and contain a few blackish scales, especially below the apex. *Exp. al.* 10 mm. *Hindwings* and cilia brownish grey. *Abdomen* brownish grey above, obliquely striped on the sides by three or four alternating streaks of yellowish, black, and white. *Legs* pale cinereous, shaded transversely with brownish grey, leaving one or two pale spots on the tarsi.

*Type* ♂ (5847 Wlsm. Det. 1908) US. Nat. Mus. [PT. (33609) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*).

Two specimens, taken at light. [33609 had been badly broken, and was mounted for the *neuration*; the head was too much injured for figuring. Drnt.]

## PHTHORIMAEA Meyr.

*Type*: *Gelechia* (? *Bryotropha*) *operculella* Z. (Meyr. 1902).

PHTHORIMAEA Meyr. Ent. Mo. Mag. 38 103-4 (1902); Busck Bull. US. Nat. Mus. 52 502 sp. 5616-9 (1902); Pr. US. Nat. Mus. 25 773, 821-3 Pf. 30 19 (1903); 30 726 (1906); Krft. Smith's Check List Lp. Bor-Am. 110 sp. 6160-3 (1903); Meyr. Pr. Linn. Soc. NSW. 29 259, 315-6 no. 20 sp. 94 (1904); Wlsm. Fn. Haw. 1 483-5, 744 no. 7 sp. 21 Pf. 13 27 (1907); Meyr. Ann. S-Afr. Mus. 5 352 (1909).

### 1. *Phthorimaea impudica*, sp. n.

*Antennae* whitish, with slight fuscous annulations. *Palpi* white; the rather projecting brush on the under-side of the median joint streaked with dark fuscous; a blackish ring around the base of the terminal joint. *Head* and *Thorax* whitish, mottled with dark fuscous. *Forewings* dull white, much sprinkled and suffused with pale greyish fuscous, among which are some slightly raised black scales; the extreme

base of the costa is whitish, but beyond it the margin is stained with brown, three times narrowly interrupted by the pale ground-colour, thus broken into a series of three or four outwardly diminishing elongate costal spots; a short ochreous length-streak occurs near the base, below the costa, and at one-third are two small patches of raised, black, whitish tipped scales, one below the fold the other below the costa; at the end of the cell is a small fuscous stain, accompanied by a few ochreous scales, the apical portion and cilia being much dusted with greyish fuscous. *Exp. al.* 10.5 mm. *Hindwings* grey; cilia brownish grey. *Abdomen* grey; anal tuft pale ochreous, the appendages strongly developed. *Legs* whitish.

*Type* ♂ (5845 Wlsm. Det. 1908) US. Nat. Mus. [*PT.* (33608) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, 1907 (*A. Busck*). Two specimens.

### GNORIMOSCHEMA Busck.

*Type*: *Gelechia gallaesolidaginis* Riley (Busck 1900).

GNORIMOSCHEMA Busck Pr. US. Nat. Mus. **23** 227-8 Pf. 1·3 (1900): Bull. US. Nat. Mus. **52** 502-4 sp. 5620-41 (1902): Pr. US. Nat. Mus. **25** 773, 823-35 Pf. **30**·20 (1903); Krft. Jr. NY. Ent. Soc. **11** 158-62 Pf. **9**·5, 7, 18 (1903): Smith's Check List Lp. Bor-Am. 110 sp. 6164-88 (1903); Busck Pr. US. Nat. Mus. **27** 757-8 (1904); Meyr. Pr. Linn. Soc. NSW. **29** 259, 316-22 no. 21 sp. 95-103 (1904): Jr. Bomb. NH. Soc. **16** 592 (1905); Busck Can. Ent. **40** 193-4 (1908): Pr. Ent. Soc. Wash. **11** 175-7 (1909).

#### 1. *Gnorimoschema dudiella* Busck.

*Gnorimoschema dudiella* Busck [Bull. US. Nat. Mus. **52** 503 sp. 5627 (1902)<sup>1</sup> *LN.*]: Pr. US. Nat. Mus. **25** 824, 828-9 (1903)<sup>2</sup>; Krft. Smith's Check List Lp. Bor-Am. 110 sp. 6172 (1903)<sup>3</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-3</sup> — ARIZONA<sup>2</sup> [= "Col."<sup>1</sup>]. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*).

A single specimen (65800) in good condition, determined by Busck.

#### 2. *Gnorimoschema henshawiella* Busck.

= § *ochreostrigella* Chmb. 1877 (*nec* Chmb. 1875—*sp. alt.*<sup>4</sup>).

*Gelechia ochreostrigella* Chmb. Bull. US. GG. Surv. **3** 126-7 (1877)<sup>1</sup>. *Gnorimoschema ochreostrigella* Busck Bull. US. Nat. Mus. **52** 503 sp. 5632 (1902)<sup>2</sup>: Pr. US. Nat. Mus. **25** 824 (1903)<sup>3</sup>.

*Gnorimoschema henshawiella* Busck Pr. US. Nat. Mus. **25** 831, 869 (1903)<sup>4</sup>; Krft. Smith's Check List Lp. Bor-Am. 110 sp. 6177 (1903)<sup>5</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-5</sup>—COLORADO<sup>1-5</sup>. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*).

A single specimen (65799), determined by Busck.

#### 3. *Gnorimoschema saphirinella* Chmb.

*Gelechia saphirinella* Chmb. Cin. Qr. Jr. Sc. **2** 250 (1875)<sup>1</sup>. *Gelechia sapharinella* Chmb. Bull. US. GG. Surv. **4** 147 (1878)<sup>2</sup>; Hgn. Pap. **4** 99 (1884)<sup>3</sup>; Riley, Smith's List Lp. Bor-Am. 102 sp. 5473 (1891)<sup>4</sup>. *Gnorimoschema saphirinella* Busck Bull. US. Nat. Mus. **52** 503

sp. 5634 (1902)<sup>6</sup>; Pr. US. Nat. Mus. 25 824, 832 (1903)<sup>6</sup>; Krft. Smith's Check List Lp. Bor-Am. 110 sp. 6179 (1903)<sup>7</sup>; Busck Pr. US. Nat. Mus. 27 758 (1904)<sup>8</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-8</sup>—DISTRICT OF COLUMBIA<sup>5-6</sup>—TEXAS<sup>1-7</sup> [=“Ky.?”<sup>3</sup>; =“Col.”<sup>5-6</sup>]. Central America—MEXICO: SONORA: 1883 (*H. K. Morrison*).

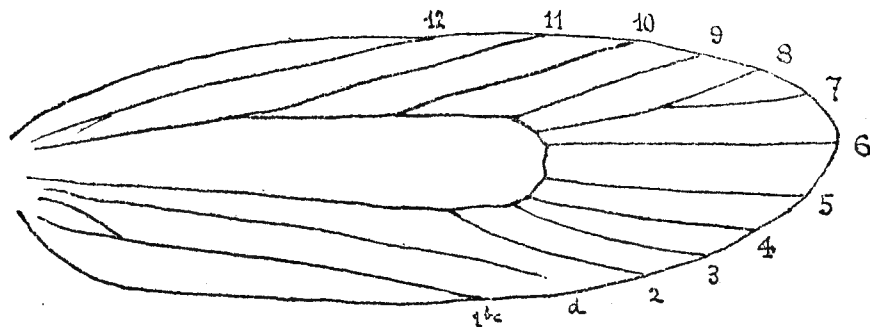
A single specimen (35478), determined by Busck.

[Some uncertainty as to the origin of the type of this and other species has been occasioned by the omission of the localities in connection with the descriptions by Chambers, Cin. Qr. Jr. Sc. 2 244-59 (1875). Hagen (<sup>3</sup>) records the type of *saphirinella* as from “Ky.?”, while Busck (<sup>6</sup>) writes “It was described from Colorado.” Chambers (*l. c.* 244) said “the following fourteen species are from California” *i. e.*—1 *Endrosis ferrestrella*; 2 *Gelechia lacteus-ochrella*; 3 *maculatusella*; 4 *thoracestrigella*; 5 *aequepulgella*; 6 *thoracenigraeella*; 7 *thoracefasciella*; 8 *occidentella*; 9 *grisseochrella*; 10 *ochreostrigella*; 11 *discostrigella*; 12 *ocherfuscella*; 13 *Tinea behrensella*; 14 *niveocapitella*; and (*l. c.* 258) added the information that “The foregoing descriptions of ‘Teneina from Texas’ are the conclusion of a series, the remainder of which have been heretofore published in the Canadian Entomologist.” The Texan species would therefore start with the second series of *Gelechia*, commencing with *saphirinella* on p. 250 and continuing to the end of the paper. Drnt.]

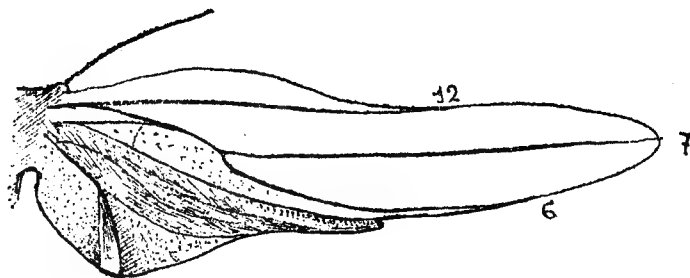
### TABERNILLAIA, gen. n.

(TABERNILLA, nom. pr.)

Type: *Tabernillaia ephialtes* Wlsm. (Tab. II. fig. 12.)



33610



J. H. Durrant, del.

14. *Tabernillaia ephialtes* Wlsm. ♂.

*Antennae* simple; basal joint without pecten. *Labial Palpi* long, recurved; both joints evenly thickened with appressed scales, nearly smooth; terminal joint nearly as long as median, pointed. *Maxillary Palpi* short. *Haustellum* well-developed. *Ocelli* absent. *Head* and *Thorax* smooth. *Forewings* elongate-ovate, obtusely pointed: *neuration* 12 veins; 7-8 stalked, to costa; rest separate. *Hindwings* ♀ normal, costa somewhat excised from middle to apex, termen sinuate: *neuration* 8 veins; 6 and 7 almost connate; 3-4 connate; 5 cubital. *Abdomen* smooth. *Legs*: hind tibiae slightly hairy.

In the ♂ the hindwings are remarkably specialised, not reminding one in any way of a Gelechiad; the flexus and apex are normal, but the margin between them is entirely altered in shape; from the apex to where 6 attains the margin on the termen the wing may be described as hastate, it then becomes widened to the flexus, and this part is somewhat complicated by folds. Of the veins only 8, 7, and 6 are conspicuous; 8 attains the costa at the end of the sinuation beyond the middle; 7 is straight, to apex; 6 arises from 7 at basal fourth, and bending downwards follows the termen.

"This genus" at Mr. Busck's request "is named after the old town Tabernilla, in the centre of the Canal Zone, which, with the entire surrounding country, will a few years hence be a thing of the past, flooded by fathoms of water at the bottom of the Panama Canal."

### 1. *Tabernillaia ephialtes*, sp. n. (Tab. II. fig. 12.)

*Antennae* dark fuscous, with faint paler annulations. *Palpi*, ♂ dark bronzy fuscous, the upper and inner sides of the median joint shining, steely whitish; ♀ with the median joint wholly whitish, as well as the inner side of the terminal. *Head*, ♂ shining, dark bronzy fuscous; ♀ shining, steel-white. *Thorax* dark bronzy fuscous. *Forewings* dark bronzy fuscous, with a slight coppery tinge about the middle of the wing in a strong light; an outwardly oblique, ovate, snow-white patch descends from the costa, at about one-sixth, slightly overreaching the fold; another, rounded, rather smaller white spot lies on the costa at about one-fourth from the apex; cilia fuscous. *Exp. al.* 10 mm. *Hindwings* in the ♂ much dilated at the flexus, with an indented angle beyond it, to which points a short fuscous hair-pencil resting in a fold between the veins, thence evenly narrowed, not sinuate, apex acute; shining, pale bronzy grey; cilia fuscous: in the ♀ the hindwings are of the ordinary Galechiaform type, the termen slightly sinuate below the moderately acute apex; a little darker than in the ♂. *Abdomen* steely greyish; fuscous across the middle in the ♂. *Legs* bronzy fuscous; hind tibiae with a white patch at the base of each pair of spurs, hind tarsi with white annulations; front tarsi with a transverse white band across the first joint.

*Type* ♀ (5850 Wlsm. Det. 1908) US. Nat. Mus.; ♂ (5849 Wlsm. Det. 1908)  $\frac{1}{2}$ , on slide, US. Nat. Mus.— $\frac{1}{2}$  (33610) Mus. Wlsm. BM.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Two specimens.

Very similar in appearance to *Telphusa niveisignella* Z., which is however a much larger species and differs in structure from *ephialtes*.

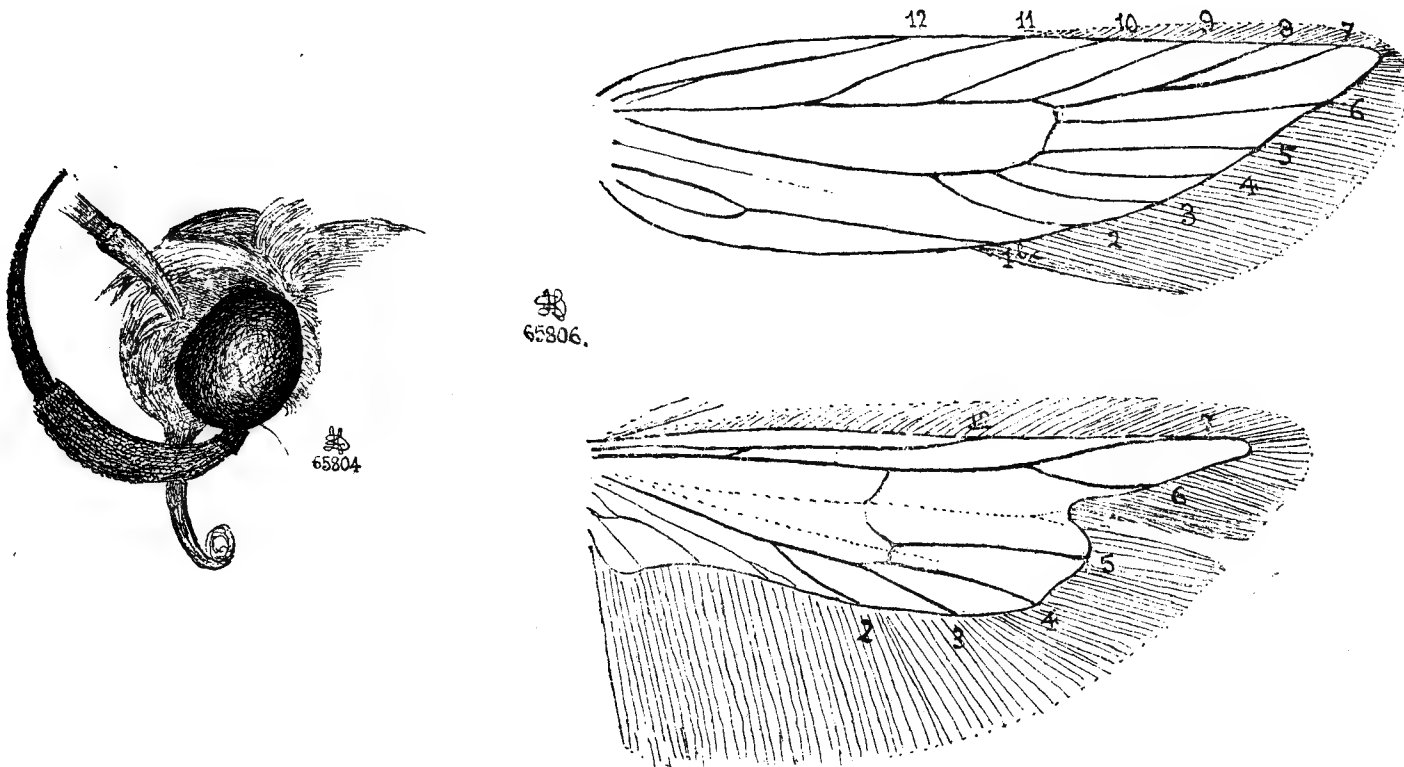
### EUDACTYLOTA, gen. n.

(εὖ=pretty; *Dactylota* Snln., nom. gen.)

*Type*: *Neodactylota barberella* Busck. (Tab. II. fig. 13.)

*Antennae*  $\frac{3}{4}$ , simple; basal joint without pecten. *Labial Palpi* long, recurved, median joint somewhat thickened with smoothly appressed scales; terminal joint as long as median, smooth, acute. *Maxillary Palpi* short. *Haustellum* well-developed. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* elongate, pointed, costa nearly straight, apex not depressed, termen very oblique, continued in even





J. H. Durrant, del.

15. *Eudactylota barberella* Busck. ♀.

curve from 6 to flexus: *neuration* 12 veins; 7-8 stalked, to costa; rest separate, 2 more remote from 3 than 3 is from 4. *Hindwings* 1, bilobed in both ♂ and ♀, but slightly differing in shape; costa nearly straight to apex which is pointed; termen excised between 6 and 5 and forming two lobes, the apical long and pointed, the lower much shorter, broad, its somewhat blunt apex being slightly above 5; dorsum somewhat sinuate between 1<sup>a</sup> and 2: *neuration* 8 veins; 6-7 stalked; 3-4 separate; 5 cubital; discoidal subobsolete on fold above 5; 12 connected to radius by 11. *Abdomen* moderate. *Legs*: hind tibiae hairy.

Allied to *Neodactylota* Busck, but HW:5 is separate from 4; the hindwings are bilobed in both sexes, and the ♂ lacks the pouch containing a hair-pencil.

1. *Eudactylota barberella* Busck. (Tab. II. fig. 13.)

*Neodactylota barberella* Busck [Bull. US. Nat. Mus. 52 504 sp. 5644 (1902)<sup>1</sup> LN.]: Pr. US. Nat. Mus. 25 835, 836-7 Pf. 30 · 23 (1903)<sup>2</sup>; Krft. Smith's Check List Lp. Bor-Am. 110 sp. 6190 (1903)<sup>3</sup>.

*Antennae* cinereous, annulate with black, the annulations connected by slender black lines above. *Palpi* smooth, recurved to above the vertex, terminal joint longer than the median; cinereous, dusted with brownish fuscous scales. *Head* and *Thorax* greyish brown. *Forewings* tawny chestnut-brown, dusted with pale cinereous and fuscous scales, especially on a transverse fascia from costa to tornus at two-thirds of the wing-length; the lower half of this fascia is margined on its inner side by a triangular dark fuscous shade, and the costa is narrowly shaded with fuscous from the base to the upper extremity of the fascia; cilia tawny, dusted with fuscous atoms. *Exp. al.* 11-12 mm. *Hindwings* cinereous; cilia with an aeneous gloss. *Abdomen* shining, greyish cinereous; anal tuft inclining to ochreous. *Hind Legs* fuscous, speckled with pale cinereous scales, with two pale bands around the tibiae, and three around the tarsal joints.

*Type* ♂ (6367) US. Nat. Mus. [Nt. ♀ (65801 *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.]

*Hab.* AMERICA, N-C. United States<sup>1-3</sup>—ARIZONA: Williams, 27. V. 1901 (*H. S. Barber*)<sup>2</sup> [= "Col."<sup>1</sup>]. Central America—MEXICO: GUERRERO: *Amula*, 6000 ft., VIII-IX. (*H. H. Smith*). Six specimens.

## TELPHUSA Chmb.

[?=ADRASTEIA Chmb.] ; = XENOLECHIA Meyr.

Type 1 : *Gelechia longifasciella* Clms. (= *Telphusa curvistrigella* Chmb. ; Chmb. 1872).

TELPHUSA Chmb. Can. Ent. 4 132-3, 174 (1872) : Bull. US. GG. Surv. 4 163 (1878) ; Busck Bull. US. Nat. Mus. 52 496-7 sp. 5554-66 (1902) : Pr. US. Nat. Mus. 25 773, 783-9, 931-2 Pf. 28·5 (1903) ; Krft. Smith's Check List Lp. Bor-Am. 109 sp. 6094-6107 (1903) ; Busck Pr. US. Nat. Mus. 30 722-3 (1906) : Pr. Ent. Soc. Wash. 8 90-1 (1907) ; Wlsm. Pr. Z. Soc. Lond. 1907 935-7 no. 17 sp. 32-4 Pf. 51·12, 15 (1908) ; Meyr. Ann. Transv. Mus. 2 11-12 Pf. 4·4-7 (1909).

Type 2 : *Anacamptis aethiops* Wstwd.

XENOLECHIA Meyr. HB. Br. Lp. 569, 583-4 no. 11 sp. 1-3 (1895) ; Wlsm. Pr. Z. Soc. Lond. 1897 72 no. 13 sp. 38 (1897).

[Type : *Adrasteia alexandriacella* Chmb.

ADRASTEIA Chmb. Can. Ent. 4 149-50, 206-7 (1872) : Bull. US. GG. Surv. 4 128 (1878).

PSORICOPTERA (Stn.) Chmb. Can. Ent. 5 72 (1873).

?=TELPHUSA Chmb.—*vide* Busck Pr. US. Nat. Mus. 25 784 (1903).]

### 1. *Telphusa ochrifoliata*, sp. n. (Tab. II. fig. 15.)

*Antennae* dark fuscous, annulate with pale ochreous. *Palpi* dark fuscous, sprinkled with pale ochreous ; the median joint above, and the apex of the terminal, pale ochreous. *Head* shining, steel-whitish. *Thorax* dark fuscous, with some ochreous scaling. *Forewings* purplish fuscous, blackish at the extreme base ; with a large cream-ochreous leaf-like patch, commencing near the base, its upper edge touching the costa, its lower edge resting on the fold, and its outer extremity running to an outwardly pointed angle on the cell about the middle ; this patch is narrowly margined, except on the costa, with black, and there are two black dots beyond it, one at each angle of the cell, with a few chestnut-brown scales between them ; a pale cream-ochreous spot occurs at the commencement of the costal cilia ; a smaller one, containing two black dots, on the termen below the apex ; cilia fuscous, with some admixture of ochreous scales along the termen. *Exp. al.* 14 mm. *Hindwings* grey, with a slight brownish tinge ; cilia pale brownish grey. *Abdomen* fuscous. *Legs* pale cream-ochreous, banded with fuscous externally.

*Type* ♂ (5974 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO : VERA CRUZ : Cordova, I. (*F. Knab*). Unique.

### 2. *Telphusa melanoleuca*, sp. n.

*Antennae* black, with three white annulations about their middle ; the basal joint white, with a black spot above on its outer half. *Palpi* stout, strongly recurved, the terminal joint longer than the median ; black, the median joint with a white ring at each extremity, the terminal joint broadly ringed at its base, and narrowly before its apex, with white. *Head* white above. *Thorax* black. *Forewings* brown-black, with an oblique white band leaving the costa at one-fifth, descending obliquely outward to the dorsum at one-fourth, and extending along it to the tornus, before and about which it throws up two angular encroachments upon the dark ground-colour, which almost divides them on the dorsum before the tornus ; in this white band, below the middle of the fold, is a shining bottle-green spot, preceded by dark raised scales on the basal patch, with two tufts of white raised scales on either side of the fold, one above the other ; beyond it a third patch of white raised scales lies above the fold, at the first upward angle of the white dorsal band ; a small white costal streak-spot precedes the cilia and is followed by a series of four, reaching to the apex, below which is another which almost meets the last of the series ; costal and apical cilia, except where interrupted by the white spots, brown-black ; terminal and tornal cilia dirty whitish ;

a bluish green iridescence pervades the part of the dark basal patch and the dark wing-surface about the lower edge of the cell. *Exp. al.* 16 mm. *Hindwings* a little broader than the forewings, semitransparent; pale cinereous, much shaded with lightish brown; cilia pale brownish. *Abdomen* brownish cinereous; white beneath. *Legs* pale cinereous, banded and shaded with brownish.

*Type* ♀ (65680) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65681) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

Resembling 5554 *longifasciella* Clms. in general appearance, but differing in the more broken white markings, and in the distinctness of the white costal and apical spots.

### 3. *Telphusa ripula*, sp. n. (Tab. II. fig. 16.)

*Antennae* black, with white annulations. *Palpi* with the median joint brown externally, paler on the inner side, a white annulus around its apex; terminal joint black, with a white spot before the apex. *Head* and *Thorax* pale brownish fuscous. *Forewings* bronzy brown, mottled with blackish, and partially sprinkled with pale cinereous scales along the costa, and in a line from the base below the fold reaching the dorsum beyond the middle, also in a patch at the tornas; at about one-fourth from the base is a greenish white, outwardly oblique costal streak, not quite attaining to the dorsum, on either side of it are small patches of raised scales; the median area is blackish and is continued on the outer side of the oblique streak to nearly two-thirds the wing-length, its upper edge forming a zigzag line above the cell, partially outlined by whitish cinereous scales, with a few spots of dark steel-grey along the lower edge of the cell; the apex is much speckled with pale cinereous; cilia blackish at the apex, fading to brownish grey and speckled with pale cinereous downward. *Exp. al.* 14 mm. *Hindwings* brownish grey, more thickly scaled around the margins than towards the middle and base; cilia brownish grey. *Abdomen* brownish grey, with paler transverse segmental lines; anal tuft greenish white. *Legs* brownish, dusted and faintly ringed with pale cinereous.

*Type* ♀ (65693) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Totonicapam, 8500–10,500 ft. (*G. C. Champion*). Unique.

### 4. *Telphusa chionostigma*, sp. n. (Tab. II. fig. 17.)

*Antennae* bronzy black. *Palpi* with the median joint evenly hirsute beneath; whitish ochreous, touched with blackish above near its apex; terminal joint black, tufted at its upper side, the short naked apex ochreous. *Head* ochreous above; face whitish ochreous. *Thorax* and tegulae deep purplish black. *Forewings* deep purplish black, with two distinct, clearly defined, white spots—one ovate, placed obliquely, touching the costa at one-fourth from the base, its outer extremity resting on the fold, beyond which are a few ochreous scales in the fold; the other, semilunate, its base resting on the costa before the apex; a minute white dot at the extreme apex; cilia smoky black. *Exp. al.* 19 mm. *Hindwings* and cilia smoky brownish fuscous. *Abdomen* and *Legs* purplish fuscous; hind tibiae banded with cream-white at each pair of spurs; hind tarsi also indistinctly banded with creamy white.

*Type* ♀ (5831 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla (*A. Busck*). Unique.

The terminal joint of the labial palpi with tuft of scales on the upper side, resembling that of *Psoricoptera gibbosella* Z., but hardly so strongly developed; the remote origin of veins 3 and 4 in the hindwings, and the stalking of 6 and 7, renders it necessary to include this in *Telphusa* Chmb.

### 5. *Telphusa niveisignella* Z.

*Psoricoptera niveisignella* Z. Hor. Soc. Ent. Ross. 13 333-5 Pf. 4·106 (1877)<sup>1</sup>.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup> (*Ribbe*). South America—COLOMBIA: CUNDINAMARCA: Bogota (*Baron von Nolcken*)—PERU: CUZCO: Cuzco Mts. (*Garlepp*, Stgr. 1895).

The specimen from Bogota was determined by Zeller, and agrees with *chionostigma* in having HW:6-7 stalked, and HW:3-4 remote, as also in the clothing of the palpi. The Cuzco specimen (73496) is in much finer condition, and the terminal joint of the palpi is consequently more evenly and strongly clothed.

### 6. *Telphusa glandiferella* Z.

=*sella* Chmb.<sup>3</sup>; =†*glandifuella* Chmb.; =†*glandifera* Chmb.

*Gelechia* (*Anacampsis*) *glandiferella* Z. Verh. ZB. Ges. Wien 23:1873 275-6 Pf. 4·25 (1873)<sup>1</sup>. *Gelechia sella* Chmb. Can. Ent. 6 238 (1874)<sup>2</sup>. *Gelechia glandifuella* Chmb. Can. Ent. 9 14 (1877)<sup>3</sup>. *Gelechia glandifera* Chmb. Can. Ent. 9 24 (1877)<sup>4</sup>. *Gelechia glandiferella* Chmb. Bull. US. GG. Surv. 4 144 (1878)<sup>5</sup>; Hgn. Pap. 4 99 (1884)<sup>6</sup>. *Gelechia sella* Frey Pap. 4 99 (1884)<sup>7</sup>. *Gelechia glandiferella* Riley, Smith's List Lp. Bor-Am. 101 sp. 5382 (1891)<sup>8</sup>. *Xenolechia glandiferella* Wlsm. Pr. Z. Soc. Lond. 1897 72 sp. 38 (1897)<sup>9</sup>. *Telphusa glandiferella* Busck Bull. US. Nat. Mus. 52 497 sp. 5564 (1902)<sup>10</sup>; Pr. US. Nat. Mus. 25 784, 788-9 (1903)<sup>11</sup>; Krft. Smith's Check List Lp. Bor-Am. 109 sp. 6105 (1903)<sup>12</sup>.

*Hab.* AMERICA, N-C-I. United States<sup>1-12</sup>—KENTUCKY<sup>7</sup>—TEXAS<sup>1-6, 9-12</sup>: VII-VIII<sup>1</sup>: BOSQUE CO.: 11-20. V, 22. VII, 10-25. X. (*G. W. Belfrage*)—CALIFORNIA: MENDOCINO: Head of Noyo, 8-11. VI. 1871 (*Wlsm.*); SHASTA: Hatchet Creek, 14-17. VII. 1871 (*Wlsm.*); Pit River, 21-26. VII. 1871 (*Wlsm.*); SISKIYOU: Mt. Shasta, 2.VIII-1.IX. 1871 (*Wlsm.*). Central America—MEXICO: TABASCO: Teapa, II. (*H. H. Smith*). West Indies<sup>9</sup>—GRENADA<sup>9</sup>: Mt. Gay Estate, 3000 ft., VIII. (*H. H. Smith*)<sup>9</sup>.

## PSORICOPTERA Stn.

Type: *Gelechia* (*Chelaria*) *gibbosella* Z. (Stn. 1854).

PSORICOPTERA Stn. Ins. Br. Lp-Tin. (†*PHORICOPTERA* 76), 100-1 no. 7 sp. 1 Pf. 4·4<sup>c</sup> (1854); Hnmn. Schm. Deutsch. Tin. 188, 192 no. 417 sp. 270 (1871), Tbl. 5, 31 no. 417 (1876); Stgr-Wk. Cat. Lp. Eur. 289 no. 193 sp. 1788 (1871); Snln. Vlind. Nederl. Micr. 428, 609-11 no. 41 sp. 1 Pf. 8·259, 272 (1882); Meyr. HB. Br. Lp. 569, 604-5 no. 14 sp. 1 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 140 no. 299 sp. 2507-8 (1901); Splr. Schm. Eur. 2 359 no. 23 Pf. 87·60 (1910).

### 1. *Psoricoptera trigonota*, sp. n.

*Antennae* slightly biserrate toward the apex; umber-brown. *Palpi* strongly recurved, the terminal joint longer than the median, closely clothed above to the apex; cinereous, mottled with umber-brown. *Head* dark umber-brown; face shining, fawn-ochreous. *Thorax* dark brown, mottled with shining fawn-ochreous. *Forewings* shining, fawn-ochreous, mottled with darker and paler shades of umber-brown, with some fuscous scaling at the base; on the commencement of the cell is a conspicuous flap of scales;

on the middle of the costa a large triangular patch, consisting of two shades of umber-brown, with some dark fuscous, is preceded and followed by small costal spots of the same; below it towards the dorsum, near to the base, are a few raised scales of umber-brown; the outer third of the wing, except towards the costa, is much shaded with umber-brown, mottled, especially along the termen, with dark fuscous; cilia mottled with pale fawn-ochreous and umber-brown, these, and all the darker markings on the wing-surface, are very changeable in colour, according to the angle at which the light strikes them. *Exp. al.* 16–21 mm. *Hindwings* greyish brown; cilia brownish grey. *Abdomen* yellowish brown, with paler transverse bars; anal tuft whitish ochreous, streaked with brown. *Legs* whitish ochreous; hind tibiae speckled, and tarsi banded with umber-brown.

*Type* ♂ (65630); ♀ (65633) *Teapa*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65632, 65634; 6236 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C-S. **Central America**—MEXICO: TABASCO: *Teapa*, III–IV. (*H. H. Smith*)—PANAMA: PANAMA: *La Chorrera*, 1.IV–15.V.1898 (*C. H. Dolby-Tyler*). **South America**—FRENCH GUIANA: *St. Jean*, *Rio Maroni* (*W. Schaus*). Nine specimens.

This species agrees with *Psoricoptera gibbosella* Z. in neuration [FW: 12 veins; 7–8 stalked, to costa; 3–4 truncate. HW: 8 veins; 3–4 separate, truncate; 6–7 closely approximate towards base], but differs somewhat in the smooth scaling of the median joint of the palpi, thus resembling *Prostomeus* Busck, which however may be separated by having HW: 6–7 stalked.

### GELECHIA Hb.

*Type*: *Tinea rhombella* S-D., Hb. Pf. 40·277 (Stph. 1835).

GELECHIA Hb. Verz. Schm. 415 sp. 4019–23 (1826); Stph. Ill. Br. Ent. Haust. 4 422 no. 1217 sp. 4021 (1835); Z. Is. 1839 197–202 no. 28 sp. 1–85 [A. a. β. GELECHIA Z. Is. 1839 197–200 sp. 6–53] (1839); HS. SB. Schm. Eur. 5 11, 43 no. 66 Pf. 12·39, 41–2 (1853), 157–88 sp. 397–505 (1854); Stn. Ins. Br. Lp-Tin. 76, 101–39 no. 8 sp. 1–95 Pf. 4·5–5<sup>'''</sup>, 9·11–12, 10·12 (1854); List Br. An. BM. 16 Lp. 65–86 no. 8 sp. 1–95 (1854); Wkr. Cat. Lp. BM. 29 568–659 no. 14 sp. 1–386 (1864); 30 1018–28 (1864); 35 1828–31 (1866); Stn. NH. Tin. 9 1–276 Pl. 1–8 (1865); 10 1–304 Pl. 9–16 (1867); Hnnnn. Schm. Deutsch. Tin. 188, 193–230 no. 418 sp. 271–332 (1870), Tbl. 5, 31–5 (1876); Stn. Ent. Mo. Mag. 7 165–6 (1870); Stgr-Wk. Cat. Lp. Eur. 289 no. 194 sp. 1789–1870 (1871); Stgr-Rbl. Cat. Lp. Pal. 2 142–51 no. 303 sp. 2537–2768 (1901); Z. Hor. Soc. Ent. Ross. 13 335–73 (1877); Snln. Vlind. Nederl. Micr. 429, 619–68, 1087 no. 44 sp. 1–47 (A. GELECHIA 629–42, 1087 sp. 1–17) Pf. 8·264, 267, 11·388–90 (1882); Tijd. Ent. 27 167–9 Pf. 9·2–3 (1884); Wlsm. Tr. Ent. Soc. Lond. 1881 261–2 Pf. 12·30–1 (1881); 1891 92–4 Pf. 4·30–1 (1891); Pr. Z. Soc. Lond. 1891 519–20, 545 no. 39 sp. 71–9 (1892); 1896 278 (1896); 1897 72–7 no. 14 sp. 39–52 (1897); 1907 937–41 no. 18 sp. 35–40 Pf. 51·13–14 (1908); Ent. Mo. Mag. 36 216–8 (1900); 40 221–3, 265–7 (1904); NH. Sokotra 346–7 Pf. 21·5 (1903); Pr. US. Nat. Mus. 33 197–8 (1907); Fn. Haw. 1 731–3, 744 no. 7·1 sp. 21·1 (1907); Meyr. Tr. NZ. Inst. 18:1885 162, 166–70 no. 5 sp. 6–14 (1886); 39:1906 118–9 (1907); 41:1908 12 (1909); Tr. Ent. Soc. Lond. 1901 573–4 (1901); Pr. Z. Soc. Lond. 1908 725–6 (1908); Pr. Linn. Soc. NSW. 29 259, 308–13 no. 18 sp. 83–90 (1904); Ann. S-Afr. Mus. 5 351, 370–1 (1909); Ann. Transv. Mus. 2 12 Pf. 4·8–9 (1909); Chmb. Bull. US. GG. Surv. 4 141–8 (1878); Riley, Smith's List Lp. Bor-Am. 100–3 sp. 5298–5511 (1891);

Busck Bull. US. Nat. Mus. **52** 511-18 sp. 5714-5833 (1902): Pr. US. Nat. Mus. **25** 773, 851-902, 935-7 Pf. **31**·29 (1903): **27** 759-60 (1904): Can. Ent. **38** 122-3 (1906): **40** 194 (1908): Pr. Ent. Soc. Wash. **8** 91-2 (1907): **9** 87-8 (1908): **11** 88-9, 177-82 (1909): Jr. NY. Ent. Soc. **15** 136 (1907): Ent. News **19** 317 (1908); Krft. Smith's Check List Lp. Bor-Am. 111-12 sp. 6216-6328 (1903): Jr. NY. Ent. Soc. **16** 184-6 (1908); Strand Berl. Ent. Zts. **47** 155-6 (1902); Fuchs Stett. Ent. Ztg. **63** 323-4 (1902); Petry Deutsche Ent. Zts. **17** 3-4 (1904); Rbl. Ann. KK. Hofmus. Wien **19** 349-50 sp. 1307-14 Pf. **5**·22-4 (1904); Krulikovsky Rev. Russ. Ent. **5**:1905 19-20 (1905); Mbl. Bull. Soc. Ent. Fr. **1907** 79 (1907); Chrt. Nat. **30** (2 s. **22**) 59-60 (1908); Splr. Schm. Eur. **2** 360-5 sp. 1-89 tf. 360·125 Pf. **87**·65-77 (1910).

Busck [Pr. US. Nat. Mus. **25** 852 (1903)] notes that *conclusella* Wkr. and *bosquella* Chmb. differ from other species in having FW: 3-4 stalked; in this character they agree with *rhombella* S-D., the type of the genus *Gelechia* Hb. [FW: 12 veins; 7-8 stalked, to costa; 3-4 stalked; 5 remote from 6; closely approximate to 4 at base; rest separate. HW: 8 veins; 6-7 separate, but closely approximating towards base; 3-4 short-stalked; 5 cubital, bent towards 4; 11 connecting radius to 12]; it is therefore obvious that the geneonym must be restricted to this group should subdivision become necessary.

### 1. *Gelechia bosquella* Chmb.

† *basqueella* Chmb. († *bosquella* Chmb.); = *costipunctella* Mschl.<sup>9</sup>.

*Oecophora basqueella* Chmb. Can. Ent. **7** 92 (1875)<sup>1</sup>. *Gelechia basqueella* Chmb. Can. Ent. **7** 124 (1875)<sup>2</sup>. *Gelechia?* *bosquella* Chmb. Bull. US. GG. Surv. **4** 87, 142 (1878)<sup>3</sup>. *Gelechia* (*Bryotropha?*) *bosquella* Wlsm. Tr. Am. Ent. Soc. **10** 178 (1882)<sup>4</sup>. *Gelechia bosquella* Hgn. Pap. **4** 98 (1884)<sup>5</sup>. *Gelechia costipunctella* Mschl. Ab. Senck. Nat. Ges. **15** 344, 354 (1890)<sup>6</sup>. *Gelechia bosquella* Riley, Smith's List Lp. Bor-Am. 100 sp. 5329 (1891)<sup>7</sup>. *Gelechia costipunctella* Wlsm. Pr. Z. Soc. Lond. **1891** 519, 545 sp. 75 (1892)<sup>8</sup>. *Gelechia bosquella* Wlsm. Pr. Z. Soc. Lond. **1897** 75 sp. 46 (1897)<sup>9</sup>. *Gelechia basquella* Busck Bull. US. Nat. Mus. **52** 512 sp. 5729 (1902)<sup>10</sup>: Pr. US. Nat. Mus. **25** 853, 864-5 (1903)<sup>11</sup>; Krft. Smith's Check List Lp. Bor-Am. 111 sp. 6232 (1903)<sup>12</sup>. *Gelechia bosquella* Wlsm. Ent. Mo. Mag. **39** 260 (1903)<sup>13</sup>.

*Hab.* AMERICA, N-C-I. United States<sup>1-5, 7, 9-13</sup>—ATLANTIC STATES<sup>10</sup>—DISTRICT OF COLUMBIA<sup>11</sup>: ⊕ *Cassia chamaecrista* (*A. Busck*)<sup>11</sup>—KENTUCKY<sup>11</sup>—MISSOURI<sup>2</sup>—IOWA<sup>11</sup>—KANSAS<sup>11</sup>—TEXAS<sup>1-2, 5, 9-13</sup>: BOSQUE CO.<sup>1, 4, 13</sup>: Waco (*G. W. Belfrage*)<sup>5</sup>—FLORIDA: Key West (*A. Busck*)<sup>11</sup>. Central America—MEXICO: VERA CRUZ: Cordova, V. 1908 (*F. Knab*; 5832 Drnt. Det. 1908, US. Nat. Mus.): TABASCO: Teapa, III. (*H. H. Smith*). West Indies<sup>6, 8-11</sup>—JAMAICA<sup>9</sup>: ST. ANDREW: Constant Springs, 18-23. XII. 1904 (*Wlsm.*): ST. ANN: Moneague, XI. 1891 (*P. Rendall*)<sup>9</sup>, 9-20. I. 1905 (*Wlsm.*); Runaway Bay, 19. II - 27. III. 1905 (*Wlsm.*)—PORTO RICO<sup>6, 8-9, 11</sup>—ST. CROIX: 23. IV. (*W. von Hedemann*)<sup>9</sup>—ST. THOMAS: 10. IV. (*F. Gudmann*)<sup>9, 11</sup>—GRENADA<sup>9</sup>: Balthazar, 250 ft., 5-10. IV. (*H. H. Smith*).—On board *Valhalla*, R.Y.S. (after leaving West Indies), 1. V. 1904 (*M. J. Nicoll*).



## 2. *Gelechia phalacra*, sp. n.

*Antennae* blackish, not annulate. *Palpi* cream-white, the median joint with an even brush beneath; terminal joint tipped with fuscous. *Head* cream-coloured, with long white scales meeting over the vertex. *Thorax* cream-coloured, tegulae dark fuscous. *Forewings* with straight margins and lanceolate apex; dark fuscous, a slender streak of pale cream-colour from the base along the margin to the flexus; a small costal spot, at the commencement of the cilia, preceded by a larger dorsal spot, both pale cream-colour; a minute spot of the same on the cell, about the middle of the wing, is preceded by another at the apex, and others, along the termen, are followed by black scales; a similar spot lies on the fold at about its middle; cilia dark fuscous. *Exp. al.* 9 mm. *Hindwings* pale greyish cinereous; cilia slightly tinged with fuscous. *Abdomen* greyish cinereous, tinged with fuscous. *Legs* fuscous, with pale cream-coloured annulations.

*Type* ♂ (35653) Mus. Wlsm. BM. [PT. (35654) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Two specimens.

Most nearly allied to *donatella* Wkr., but the pale spots are smaller and the terminal joint of the palpi is slightly longer and more shaded.

## 3. *Gelechia lacticaput*, sp. n.

*Antennae* dark brown, cream-colour at the base to one-fifth of their length, with some creamy speckling near their apex. *Palpi* cream-colour, the median joint somewhat thickened, the terminal joint with two slight brown annulations. *Head* and *Thorax* cream-colour, the latter with a dark brown patch posteriorly. *Forewings* dark brown, with a very narrow snow-white basal patch extending across the wing, an oblique snow-white costal patch at one-fourth reaching to the fold and projecting outward on the cell, a minute white oblique costal streak at the commencement of the costal cilia, and a large snow-white semicircular tornal patch extending through the terminal cilia and sparsely sprinkled with brownish scales; cilia at the apex dark brown. *Exp. al.* 15 mm. *Hindwings* pale purplish grey; cilia with a slight ochreous tinge. *Abdomen* grey. *Legs* creamy; tarsi banded and speckled externally with dark brown.

*Type* ♂ (65682) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65683) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Two specimens.

A conspicuous and distinct species.

## 4. *Gelechia cerussata*, sp. n. (Tab. II. fig. 18.)

*Antennae* fuscous, annulate with pale cream-ochreous. *Palpi* pale cream-ochreous; the median joint moderately thickened, mottled with fuscous on the outer side and beneath; terminal joint with two fuscous annulations. *Head* and *Thorax* pale cream-ochreous. *Forewings* obtusely pointed; dark purplish fuscous, with a very narrow, pale cream-ochreous, straight, transverse band at the extreme base, and an elongate-ovate white patch, sparsely dusted with fuscous, occupying the tornus and termen, with the cilia, to below the apex, near which it encloses a dark fuscous dot; the cilia at the extreme apex and above it smoky fuscous; a blackish dot occurs on the disc, above the middle, at scarcely one-half from the base. *Exp. al.* 14 mm. *Hindwings* grey; cilia pale brownish grey. *Abdomen* (missing). *Legs* pale cream-ochreous; the hind tibiae twice banded obliquely with smoky grey externally; hind tarsi sprinkled externally with fuscous.

*Type* ♂ (5977 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: VERA CRUZ: Cordova, V. 1908 (*F. Knab*). Unique.

## 5. *Gelechia infracta*, sp. n.

*Antennae* fuscous. *Palpi* dark fuscous, the median joint with two, the terminal joint with three paler

subochreous bands, the last including the apex. *Head* and *Thorax* dark fuscous; a few ochreous scales above the eyes. *Forewings* tawny fuscous, with a dark fuscous median shade running through them, from near the base to the apex, interrupted before the middle by a large white, outwardly oblique, costal patch which reaches to the fold expanding outward on the cell; this is clearly defined, its origin being at one-fourth from the base; there is a faintly indicated spot of pale scales at the end of the cell and another above and beyond it on the costa; the dorsum is narrowly white from base to flexus; cilia greyish fuscous, sprinkled with whitish ochreous. *Exp. al.* 17 mm. *Hindwings* shining, pale grey; cilia inclining to ochreous. *Abdomen* leaden grey. *Legs* whitish ochreous, the tarsi and tibiae widely banded with fuscous.

*Type* ♂ (65684) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65685) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Two specimens.

### 6. *Gelechia cacoderma*, sp. n.

*Antennae* tawny fuscous, faintly annulate with pale ochreous. *Palpi* tawny fuscous, speckled with pale ochreous. *Head* whitish ochreous, speckled with tawny fuscous. *Thorax* tawny fuscous, speckled with pale ochreous. *Forewings* tawny fuscous, intermingled with pale brownish ochreous and blotched with brownish fuscous, the usual markings being scarcely distinguishable in the somewhat rough and mixed scaling; the darker blotching apparently coincides with a medio-plical spot, a discal spot beyond it, and another at the end of the cell, and forms a costal spot at one-fourth, another at three-fifths, and an apical shade preceded by an ill-defined transverse pale band; cilia pale brownish ochreous, speckled with tawny fuscous along their basal half. *Exp. al.* 16-21 mm. *Hindwings* broader than the forewings, scarcely sinuate below the apex; bronzy brownish, with paler greyish brown cilia. *Abdomen* brownish ochreous towards the base, shading to greyish brown posteriorly. *Legs* greyish brown, hind tibiae and tarsi banded with pale ochreous.

*Type* ♂ (65376); ♀ (65377) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65381-2, 65385) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Twelve specimens.

Closely allied to 5755 *bicostimaculella* Chmb. in colouration, but a much larger species with the paler markings less distinct.

### 7. *Gelechia veneranda*, sp. n.

*Antennae* fawn-brownish, delicately barred with blackish above. *Palpi* brownish fawn, streaked with blackish, the terminal joint nearly black throughout; the median very hirsute beneath, with long diverging scales. *Head* stone-whitish. *Thorax* fawn-grey. *Forewings* mottled with much mixed colours, of which the ground-colour may be taken as pale stone-colour; on this is a profuse sprinkling and partial suffusion of fawn-brownish, with sundry spots and streaks almost black, or at least very dark fuscous; of these two are costal, one before and one beyond the middle, and two are discal, parallel to the costal, but a little further removed from the base; the terminal and apical portion of the wing is almost entirely suffused with this dark brownish fuscous shading, and the fold is marked by a narrow line of the same throughout; all the different shades are much blended together and ill-defined, a slight rufous tinge prevailing above the fold; cilia brownish ochreous, the outer half paler. *Exp. al.* 16-17 mm. *Hindwings* brownish grey, profusely irrorated with brownish scales beyond the basal third; cilia pale brownish grey. *Abdomen* brownish cinereous. *Legs* brownish fuscous, with pale cinereous spots on the tarsal joints.

*Type* ♂ (35655); ♀ (35656) Mus. Wlsm. BM. [*PTT.* (35659, 35661-2) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Eight specimens.

### 8. *Gelechia nigripectus*, sp. n.

*Antennae* cinereous beneath, black above. *Palpi* hoary cinereous on the inner surface, sooty black externally and beneath; with a hoary ring at the apex of the median joint. *Head* and *Thorax* hoary cinereous. *Forewings* lanceolate; hoary cinereous, profusely sprinkled and shaded with brownish fuscous, leaving an indistinct pale fluctuate fascia across the outer fifth; the outer third of the cell shows an elongate black streak, apparently composed of two spots connected by a line of black scales; the terminal and dorsal parts of the wing-surface are rather more suffused and less speckled than the costal portion; cilia pale brownish cinereous, somewhat sprinkled with fuscous. *Exp. al.* 15 mm. *Hindwings* semi-transparent, grey, shading to pale bronzy brownish along the margins and especially along the costa towards the apex; cilia pale brownish cinereous. *Abdomen* pale brownish cinereous. *Legs* pale brownish cinereous, suffused externally, and broadly banded on the tarsi with brownish fuscous; anterior and median femora sooty black, with a slight sprinkling of ochreous scales.

*Type* ♂ (35666); ♀ (35667) Mus. Wlsm. BM. [PT. (35668) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Five specimens.

### 9. *Gelechia albipectus*, sp. n.

*Antennae* pale brownish fuscous. *Palpi* with the brush on the median joint closely packed, not divided, and rather tapering to its apex, sooty black beneath and externally, paler on the inner side, without a pale ring on its apex; terminal joint paler, with black dusting. *Head* pale brownish cinereous. *Forewings* pale brownish cinereous, sprinkled and smeared with fuscous, with a slight indication of four fuscous spots—one at one-fifth from the base, small; one in the fold; another on the disc a little beyond the latter and partially connected with it by fuscous scaling; the fourth at the end of the cell: the usual faintly indicated pale fascia on the outer fifth is scarcely bowed outward; cilia pale brownish cinereous, with a strong admixture of fuscous scales in their basal half. *Exp. al.* 14–15 mm. *Hindwings* brownish grey, more shaded with brown on their outer half; cilia pale brownish cinereous. *Abdomen* brownish cinereous. *Legs* pale brownish cinereous; femora ivory-white; hind tibiae dark fuscous externally, with a white spot at the base of each pair of spurs.

*Type* ♀ (35663); ♂ (35665) Mus. Wlsm. BM. [PT. (35664) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Three specimens.

Closely allied to *nigripectus* Wlsm., but all the femora, and the underside of the thorax and abdomen (except the anal segments), ivory-white, in strong contrast to those of *nigripectus* which are sooty black.

### 10. *Gelechia quinquedentata*, sp. n. (Tab. II. fig. 19.)

*Antennae* simple; pale greyish ochreous. *Palpi* stone-grey, the terminal joint inclining to ochreous; both dusted with greyish fuscous. *Head* and *Thorax* stone-grey, dusted with fuscous. *Forewings* stone-grey, dusted and spotted with greyish fuscous; four or five spots on the basal third, one at the extreme base of the costa, one on the dorsum at one-fourth, the first margined beneath by whitish scaling; a spot at the end of the cell, and one below and beyond it above the extremity of the fold; five tooth-like costal spots before the apex, with whitish scaling between them, and a >-shaped whitish mark below them pointing to the apex; cilia stone-grey, finely dusted with fuscous. *Exp. al.* 16 mm. *Hindwings* and cilia brownish grey. *Abdomen* brownish grey. *Legs* pale cinereous, the tarsi broadly banded with greyish fuscous.

*Type* ♂ (65675) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 11. *Gelechia petraea*, sp. n. (Tab. II. fig. 20.)

*Antennae* brownish cinereous, the basal joint greyish brown. *Palpi* recurved, somewhat slender; greyish brown externally, paler on their inner sides; the median joint scarcely roughened beneath; terminal

joint as long as the median, with a slender pale cinereous line along the underside, the extreme apex also pale cinereous. *Head* greyish brown. *Thorax* greyish brown along its anterior margin, whitish cinereous above; the latter half of the tegulae also whitish cinereous. *Forewings* elongate, with parallel margins and oblique termen; whitish cinereous, or pale stone-colour, with a scarcely perceptible ochreous tinge and some scattered transverse greyish brown speckling; a greyish brown spot at the base of the costa is succeeded by three costal dots before the middle; an elongate costal streak about the middle, and a smaller spot on the middle of the fold, with a discal spot above it, form with the medio-costal streak an inwardly oblique series; a small greyish fuscous spot occurs also at the end of the cell; the apex and termen are covered by a rather broad greyish brown patch, of which the inner margin is clearly defined and convex; cilia at the termen and apex much shaded with grey, but pale stone-ochreous on the dorsum. *Exp. al.* 18 mm. *Hindwings* broader than the forewings, scarcely sinuate below the apex; brassy brownish along the veins and costa, inclining to semitransparent bluish grey between the veins; cilia brownish cinereous, somewhat darker along their base. *Abdomen* pale brownish. *Legs* pale cinereous, shaded with brownish grey externally on the hairy tibiae and around the tarsal joints.

*Type* ♀ (65686) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: Las Mercedes, 3000 ft., 1881 (G. C. Champion). Unique.

## 12. *Gelechia cuneifera*, sp. n.

*Antennae* tawny grey; slightly serrate. *Palpi* with the median joint stiffly brush-like beneath, the terminal joint shorter than the median, smooth; tawny greyish. *Head* and *Thorax* tawny grey. *Forewings* with the costa slightly arched towards the base, apex depressed, termen very oblique; pale tawny grey, obscured at the apex and along the costa by darker shades of the same; the costal blotch extends from one-fifth to nearly three-fourths of the wing-length, its lower and inner edge shading to brownish fuscous, which forms first a broad wedge-shaped projection at about one-third, the apex crossing the fold, secondly, a brownish fuscous longitudinal streak reaching to the end of the cell above the middle of the wing; between this costal blotch and the broad terminal shade the paler ground-colour reaches to the costa, suggesting a pale transverse band; a few brownish fuscous scales are distributed in patches around the apex; cilia pale cinereous, somewhat sprinkled with brownish fuscous. *Exp. al.* 16 mm. *Hindwings* broader than the forewings, slightly sinuate below the acute apex; very pale grey; cilia pale brownish cinereous. *Abdomen* brownish cinereous. *Legs* tawny greyish, mottled with brownish fuscous.

*Type* ♂ (65676) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (65677) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (H. H. Smith). Two specimens.

## 13. *Gelechia translucida* Wlsm. (Tab. II. fig. 21.)

*Bryotropa translucida* Wlsm. Pr. Z. Soc. Lond. 1891 520, 545 sp. 80 (1892)<sup>1</sup>. *Gelechia translucida* Wlsm. Pr. Z. Soc. Lond. 1897 73 sp. 41 (1897)<sup>2</sup>.

*Hab.* AMERICA, C-S-I. Central America—MEXICO: VERA CRUZ: Cordova, V. 1908 (F. Knab; 5979 Drnt. Det. 1908, US. Nat. Mus.). South America—FRENCH GUIANA: Cayenne (W. Schaus). West Indies—DOMINICA<sup>1-2</sup>—ST. VINCENT (H. H. Smith)<sup>1-2</sup>—GRENADA<sup>2</sup>: Balthazar, 250 ft., 27. IV. (H. H. Smith)<sup>2</sup>; Mt. Gay Estate, 300 ft., 3-10. IX. (H. H. Smith)<sup>2</sup>.

## 14. *Gelechia mediofuscella*, Clms.

= *vagella* Wkr.<sup>14</sup>; = *fuscocochrella* Chmb.<sup>9</sup>; = *liturosella* Z.<sup>9</sup>.

*Gelechia mediofuscella* Clms. Pr. Ent. Soc. Phil. 2 11-12, 120 (1863)<sup>1</sup>: Clms-Stn. Tin. N-Am.

pp. ix, 218, 224 (1872)<sup>2</sup>. *Gelechia vagella* Wkr. Cat. Lp. BM. 29 596 sp. 237 (1864)<sup>3</sup>. *Depressaria fuscoochrella* Chmb. Can. Ent. 4 106, 129, 147-8 (1872)<sup>4</sup>. *Gelechia (Lita) liturosella* Z. Verh. ZB. Ges. Wien 23:1873 265 (1873)<sup>5</sup>. *Gelechia fuscoochrella* Chmb. Bull. US. GG. Surv. 4 143 (1878)<sup>6</sup>. *Gelechia liturosella* Chmb. Bull. US. GG. Surv. 4 144 (1878)<sup>7</sup>. *Gelechia mediofuscella* Chmb. Bull. US. GG. Surv. 4 144 (1878)<sup>8</sup>. *Gelechia (Lita) vagella* Wlsm. Tr. Am. Ent. Soc. 10 178 (1882)<sup>9</sup>. *Gelechia fuscoochrella* Hgn-Frey Pap. 4 98 (1884)<sup>10</sup>. *Gelechia liturosella* Hgn. Pap. 4 99 (1884)<sup>11</sup>. *Gelechia mediofuscella* Riley, Smith's List Lp. Bor-Am. 101 sp. 5407 (1891)<sup>12</sup>. *Gelechia vagella* Riley, Smith's List Lp. Bor-Am. 102 sp. 5506 (1891)<sup>13</sup>. *Gelechia mediofuscella* Busck Bull. US. Nat. Mus. 52 514 sp. 5764 (1902)<sup>14</sup>; Pr. US. Nat. Mus. 25 854, 885, 935 (1903)<sup>15</sup>; 27 759 (1904)<sup>16</sup>; Pr. Ent. Soc. Wash. 5 211 (1903)<sup>17</sup>; Krft. Smith's Check List Lp. Bor-Am. 112 sp. 6268 (+9268) (1903)<sup>18</sup>.

*Hab.* AMERICA, N-C. **Canada**<sup>3</sup>—NOVA SCOTIA<sup>3</sup>. **United States**<sup>1-2, 4-18</sup>—ATLANTIC STATES<sup>14</sup>—MASSACHUSETTS<sup>9</sup>—DISTRICT OF COLOMBIA<sup>15</sup>—NORTH CAROLINA: 1883 (*H. K. Morrison*)—KENTUCKY<sup>4, 10, 14</sup>—MISSOURI: ST. LOUIS: Kirkwood, 1883-4 (*M. Murtfeldt*)—TEXAS<sup>5, 11, 14</sup>—WASHINGTON<sup>16</sup>. **Central America**—MEXICO: SONORA: 1883 (*H. K. Morrison*): VERA CRUZ: Cordova, V. 1908 (*F. Knab*): GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881 (*G. C. Champion*).

### 15. *Gelechia repentina*, sp. n.

*Antennae* greyish fuscous. *Palpi* brownish ochreous, the median joint slightly roughened, with two slight bands of fuscous scales; terminal joint about as long as the median, also twice banded with fuscous. *Head* brownish ochreous. *Thorax* brownish ochreous, mottled with fuscous posteriorly. *Forewings* brownish ochreous, mottled with fuscous; a broad bluish fuscous band across their middle, occupying a space equal to half their length, its inner and outer margins both inclining to be concave and somewhat darker than the centre; a few reddish ochreous scales beyond the end of the cell are merged in a diffused fuscous shade extending to the apex; cilia pale ochreous, sprinkled with fuscous dots. *Exp. al.* 12-16 mm. *Hindwings* a little broader than the forewings; pale greyish brown, slightly transparent near their base; cilia pale brownish cinereous. *Abdomen* cinereous. *Legs* cinereous; the femora with one, the tibiae with two, and the tarsi with three brownish fuscous bands externally. *Type* ♂ (65666); ♀ (65667) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65668-9) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Five specimens.

Closely allied to *mediofuscella* Clms., but the dark markings extend across the wing, and their inner edge seems to be less oblique and to commence slightly further from the base.

### 16. *Gelechia neptica*, sp. n.

*Antennae* yellowish brown, obscurely banded with fuscous. *Palpi* yellowish brown, median joint brush-like beneath, with two fuscous bands externally; terminal joint with a fuscous band before the apex. *Head* pale cinereous, speckled with fuscous. *Thorax* yellowish brown. *Forewings* yellowish brown, with some scattered dark fuscous scales; a dark fuscous spot at the base of the dorsum, and a small one in the middle of the fold, with another at the outer end of the fold; the first plical spot is followed by an

oblique, elongate, very dark fuscous discal spot, a smaller costal spot preceding the cilia; the pale yellowish brown terminal cilia are much dusted with dark fuscous, which is thicker at and around the apex. *Exp. al.* 15 mm. *Hindwings* pale brownish grey; cilia brownish cinereous. *Abdomen* brownish cinereous above, tawny fuscous at the sides; pale ochreous beneath. *Legs* tawny fuscous, banded with very pale ochreous on the tibiae and around the tarsal joints.

*Type* ♂ (65671, *Omiteme*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65672, 65674) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: *Omiteme*, 8000 ft., VII. (*H. H. Smith*); *Amula*, 6000 ft., VIII. (*H. H. Smith*). Four specimens.

### 17. *Gelechia bufo*, sp. n.

*Antennae* yellowish brown, with black annulations. *Palpi* hoary, the median joint barred with black externally, and sprinkled with black and yellowish brown beneath; the terminal joint with two blackish bands. *Head* hoary, sprinkled with yellowish brown scales. *Thorax* yellowish brown. *Forewings* elongate, narrow, lanceolate; yellowish brown, mottled with black; after a small black spot at the extreme base of the costa there is, at one-third, a triangular black costal spot, produced obliquely downward to the fold, and thence diffused in an overflow of blackish scales along the dorsum to a cloudy spot of the same before the tornus; there is also a smaller black spot on the middle of the costa, with another placed obliquely below it on the cell, and a third costal spot before the cilia, the space beyond the cell, as well as the terminal and apical area, being much clouded with thickly bestrewed blackish scales, some appearing also on the brownish ochreous cilia. *Exp. al.* 13-14 mm. *Hindwings* leaden grey; cilia brownish grey. *Abdomen* greyish fuscous. *Legs* hoary, blotched with brown externally.

*Type* ♂ (65662) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65663, 65665) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: *Amula*, 6000 ft., VIII. (*H. H. Smith*). Four specimens.

### 18. *Gelechia inaequalis*, sp. n.

*Antennae* brownish white, barred above with brownish fuscous. *Palpi* white, the terminal joint much dusted with brownish fuscous. *Head* white. *Thorax* brownish white, smeared with brownish fuscous anteriorly. *Forewings* brownish white, dusted with brownish fuscous, increasingly towards the apex; with two brownish fuscous incomplete fasciae—the first at one-third from the base, tending a little obliquely outward from the costa, its inner edge clearly defined, its outer side somewhat diffused toward a small discal spot opposite its middle; the second, much smaller and not oblique, descending from the costa at two-thirds, absorbing a small spot at the end of the cell and merging in the paler speckling of the surface below the cell; there is a small spot below the costa, half-way between the base and the first fascia, and one or two slight spots on the termen at the base of the brownish white, somewhat dusted, cilia. *Exp. al.* 10 mm. *Hindwings* grey; cilia pale greyish ochreous. *Abdomen* brownish grey. *Legs* whitish cinereous, with pale fuscous tarsal spots.

*Type* ♂ (35644) Mus. Wlsm. BM. [PTT. (35645-6) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Four specimens.

Somewhat resembling 5564 *Telphusa glandiferella* Z., but the conspicuous dark spot is costal, not dorsal.

### 19. *Gelechia concinna*, sp. n. (Tab. II. fig. 22.)

*Antennae* creamy white, delicately annulated with fuscous. *Palpi* creamy white, the median joint roughened beneath; the terminal joint as long as the median, sprinkled with fuscous, and banded before the apex. *Head* and *Thorax* creamy white, the latter somewhat shaded with greyish fuscous. *Forewings* creamy white, delicately shaded with brownish ochreous, especially below the fold and about the end of the cell; a minute fuscous spot at the base of the costa is followed by a triangular fuscous shade, of which the outer extremity scarcely reaches beyond the middle; a small fuscous spot at the



commencement of the costal cilia precedes an outwardly angulate unsprinkled band of the pale ground-colour, beyond which the apical and terminal portion of the wing is slightly shaded; there is a small fuscous dot in the fold, below the apex of the costal triangle, and another at the end of the cell; cilia whitish, minutely sprinkled with fuscous. *Exp. al.* 10 mm. *Hindwings* shining, pale grey; cilia pale greyish cinereous. *Abdomen* shining, pale greyish; anal segment inclining to ochreous. *Legs*: hind tibiae and tarsi banded with cream-white and greyish fuscous.

*Type* ♂ (65661) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

## 20. *Gelechia creberrima*, sp. n.

*Antennae* brown, distinctly annulate with whitish cinereous. *Palpi* recurved, the terminal joint nearly as long as the median, roughened beneath; both profusely speckled with brown and whitish cinereous. *Head* and *Thorax* brown, thickly speckled with whitish cinereous. *Forewings* reddish brown, profusely dusted with whitish cinereous, which is especially concentrated around the margins of a large, somewhat triangular, brown costal patch before the middle, reaching nearly to the fold, on which is a small spot of the same colour, a less conspicuous discal spot lying above and beyond it; a small pale cinereous spot occurs on the costa at three-fourths from the base; cilia pale cinereous, dusted at their base and along their middle with brownish fuscous. *Exp. al.* 13 mm. *Hindwings* shining, pale bone-grey, dusted at the apex on the underside; cilia pale brownish cinereous. *Abdomen* brownish grey; anal tuft inclining to ochreous above, pale cinereous externally. *Legs* brownish fuscous, banded with pale cinereous, tarsi spotted with pale cinereous; middle tibiae with two fan-like tufts in the ♂.

*Type* ♂ (65658); ♀ (65659) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65660) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Three specimens.

The costal patch in some specimens (♀ 65659) is ill-defined and diffused outwards on the margin.

## 21. *Gelechia impurgata*, sp. n. (Tab. II. fig. 23.)

*Antennae* white, dotted with fuscous above. *Palpi* white, slightly and minutely sprinkled with fuscous. *Head* and *Thorax* cream-white. *Forewings* cream-white, with a conspicuous fuscous blotch, obliquely placed on the cell, somewhat diffused at its outer end, but broken into scattered scaling which unites again in an elongate median streak beyond the end of the cell; the apex and termen are also dusted with fuscous; cilia white, sparsely dusted. *Exp. al.* 14 mm. *Hindwings* and cilia pale brownish grey. *Abdomen* white, with an ochreous tinge. *Legs* white, sprinkled with fuscous.

*Type* ♀ (35636) Mus. Wlsm. BM.

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Unique.

## 22. *Gelechia synthetica*, sp. n.

*Antennae* blackish. *Palpi* blackish, slightly pale-speckled. *Head* cinereous, speckled with black. *Thorax* blackish, with minute pale speckling. *Forewings* of even width, with rounded apex; blackish, with a slight purplish tinge and minute hoary speckling, except where black spots, each accompanied by some brownish ochreous scales, are distinguishable from the less intensely dark wing-surface; of these spots the first is on the costa at one-fourth, placed rather obliquely, with a narrow ochreous subcostal line reaching it from the base; another lies nearer to the base on the upper edge of the fold; a third, with some ochreous scales preceding and following it, lies in the fold a little before half the wing-length, and this is almost connected with a discal spot above it; another triangular black spot, with ochreous scales along its inner edge, is at the end of the cell, beyond which a short, curved, ochreous costal streak precedes the pale brownish cinereous cilia which are dusted with fuscous. *Exp. al.* 11-12 mm. *Hindwings* leaden

grey, blending to bronzy brownish outward, especially toward the margins; cilia brownish cinereous. *Abdomen* brownish fuscous, with narrow pale segmental bands. *Legs* dark fuscous externally, pale cinereous on their inner sides.

*Type* ♂ (35637); ♀ (35638) Mus. Wlsm. BM. [PTT. (35645-6) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Seven specimens.

### 23. *Gelechia pleroma*, sp. n.

*Antennae* fuscous. *Palpi* with the median joint clothed with a rather short roughened brush beneath; fuscous, sprinkled with pale cinereous; the terminal joint scarcely shorter than the median. *Head* fuscous, mixed with pale cinereous; face pale brownish cinereous. *Thorax* purplish fuscous, touched with pale cinereous posteriorly. *Forewings* with the costa slightly arched at the base, straight beyond, apex slightly depressed, somewhat obtuse, termen oblique; purplish fuscous, with very faintly indicated pale brownish cinereous mottling, a small costal spot of the same at three-fourths from the base somewhat more distinct; cilia greyish fuscous. *Exp. al.* 16 mm. *Hindwings* bronzy brownish; cilia greyish brown. *Abdomen* fuscous above, with narrow pale transverse bars; anal tuft brownish cinereous. *Legs* pale brownish cinereous, banded externally with fuscous.

*Type* ♂ (65375, *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (5835 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: *Amula*, 6000 ft., IX. (*H. H. Smith*): OAJACA: *Salina Cruz* (*W. Schaus*). Two specimens.

### 24. *Gelechia scotodes*, sp. n. (Tab. II. fig. 25.)

*Antennae* dark purplish fuscous. *Palpi* with a rough divided brush beneath, terminal joint not longer than the median; dark tawny fuscous, except along the upper surface of the median joint which is shining whitish ochreous. *Head* and *Thorax* smooth; dark tawny fuscous. *Forewings* with the apex depressed, obtusely rounded; dark tawny fuscous, obscurely sprinkled with pale cinereous in some lights; three spots darker than the ground-colour, two discal and one plical, the plical immediately below the first discal, accompanied by a few pale scales; a small whitish spot at the commencement of the costal cilia, without indication of a transverse fascia; cilia pale cinereous, much suffused with tawny fuscous. *Exp. al.* 14 mm. *Hindwings* bluish grey, overspread with brownish scales, more thinly along the cell and at the base; cilia brownish grey. *Abdomen* brownish fuscous. *Legs* whitish ochreous, suffused and banded with tawny fuscous.

*Type* ♂ (35628) Mus. Wlsm. BM.

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Unique.

### 25. *Gelechia hetaeria*, sp. n. (Tab. II. fig. 24.)

*Antennae* cinereous, fuscous above. *Palpi* cinereous, banded with black near the apex of the median joint; terminal joint suffused with black. *Forewings* rosy greyish fuscous, a black spot at the base of the costa and three elongate black spots, somewhat ill-defined, along the discal cell, with a small one beyond the end of the cell and a few black marginal spots around the apex; cilia rosy, slightly sprinkled with fuscous atoms. *Exp. al.* 15 mm. *Hindwings* pale leaden grey; cilia brownish grey, with a slight rosy tinge. *Abdomen* greyish fuscous. *Legs* cinereous, suffused and sprinkled with blackish scales.

*Type* ♂ (65688) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: *Orizaba*, XII. 1887 (*F. D. Godman and O. Salvin*). Unique.

26. *Gelechia lithodes*, sp. n.

*Antennae* brownish grey. *Palpi* pale stone-grey. *Head* pale stone-grey. *Thorax* brownish grey. *Forewings* with straightened costa and scarcely depressed apex, termen very oblique; stone-grey, sparsely dusted with blackish atoms, especially along the margins and on the base of the pale stone-grey cilia, a very few ochreous scales lying along the middle of the fold; the veins beyond the cell slightly indicated by darkened scaling. *Exp. al.* 15 mm. *Hindwings* pale leaden grey, with a brownish tinge beyond the middle; cilia pale brownish cinereous. *Abdomen* brownish cinereous, with an ochreous tinge towards the base. *Legs* pale cinereous, the tarsi sprinkled with fuscous.

*Type* ♂ (35626) Mus. Wlsm. BM. [PT. (35627) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Two specimens.

27. *Gelechia nucifer*, sp. n.

*Antennae* brownish cinereous. *Palpi* whitish cinereous, sprinkled with a few brown and fuscous scales. *Head* whitish cinereous, slightly sprinkled above. *Thorax* whitish cinereous, profusely sprinkled with fuscous. *Forewings* whitish cinereous, profusely sprinkled with fuscous, forming a small reduplicated spot on the base of the costa, and a few ill-defined groups, at the base of the cilia, around the apex and termen, otherwise evenly and profusely distributed over the wing-surface; there are three small rust-brown spots, two discal and one plical, the first discal scarcely before the middle, the second at the end of the cell; the plical spot is straight below the first discal; cilia pale cinereous, sparsely sprinkled with fuscous atoms. *Exp. al.* 15-16 mm. *Hindwings* greyish at their base, becoming brownish grey outwardly; cilia pale brownish cinereous. *Abdomen* brownish ochreous. *Legs* whitish cinerous, banded and dusted with fuscous.

*Type* ♀ (35670); ♂ (35671) Mus. Wlsm. BM. [PTT. (35701-10) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Thirty-three specimens.

28. *Gelechia rhyodes*, sp. n.

*Antennae*, *Palpi*, *Head*, and *Thorax* stone-white. *Forewings* and cilia stone-white, sparsely sprinkled beyond the basal fourth with groups of blackish scales, among which a discal spot before the middle, a spot at the end of the cell and another in the fold, slightly preceding the first, are scarcely more conspicuous than the smaller groups and scattered scales which occur towards the tornus and along the termen, spreading slightly into the cilia. *Exp. al.* 14 mm. *Hindwings* whitish grey, slightly darkening toward the apex; cilia pale brownish cinereous. *Abdomen* brownish cinereous, rather shining. *Legs* (missing).

*Type* ♀ (35629) Mus. Wlsm. BM. [PT. (35630) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Two specimens.

In the second specimen (35630) the discal spots appear even less conspicuous, but those along the termen rather more distinct, the sparsely sprinkled blackish scales occurring nearly to the base about the fold, and there is one at the extreme base of the costa; the legs are stone-white.

29. *Gelechia sonorensis*, sp. n. (Tab. II. fig. 26.)

*Antennae* sooty black above, barred with whitish ochreous beneath, the base entirely whitish ochreous. *Palpi* black, a whitish ochreous band around the apex of the median joint, another before the middle of the terminal, the apex whitish ochreous. *Head* whitish ochreous. *Thorax* sooty fuscous, tegulae whitish ochreous. *Forewings* whitish ochreous along the costal third, with a black spot at the extreme base of the costa and two elongate sooty fuscous spots on the costa, one before and one beyond the middle; the dorsal two-thirds sooty fuscous, interrupted by an oblique branch of the paler costal surface running

towards the tornus, beyond which a sooty streak runs to the apex and through the cilia; the upper edge of the dark portion is slightly undulate and there is some admixture of ochreous scales upon its whole surface; cilia greyish fuscous, with a slight sprinkling of ochreous scales. *Exp. al.* 11 mm. *Hindwings* grey; cilia brownish grey. *Abdomen* brownish grey. *Legs* brownish fuscous, with pale ochreous annulations.

*Type* ♀ (35631) Mus. Wlsm. BM.

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Unique.

### POLYHYMNO Chmb.

= COPOCERCIA Z.

*Type 1: Polyhymno luteostrigella* Chmb. (Chmb. 1874).

POLYHYMNO Chmb. Can. Ent. 6 246-9 (1874): 8 30-1 (1876): Bull. US. GG. Surv. 4 161 (1878): Jr. Cin. Soc. NH. 2 198, ff. 203-26 (1880); Riley, Smith's List Lp. Bor-Am. 104 sp. 5586-7 (1891); Wlsm. Tr. Ent. Soc. Lond. 1891 95-7 Pf. 4-32-3, 7-78 (1891): Pr. Z. Soc. Lond. 1891 525, 546 no. 49 sp. 90 (1891): 1897 77-9 no. 16 sp. 54-7 (1897); Busck Jr. NY. Ent. Soc. 8 235-6 Pf. 9-1 (1900): Bull. US. Nat. Mus. 52 504 sp. 5647-9 (1902): Pr. US. Nat. Mus. 25 773, 839-40 Pf. 31-26 (1903); Krft. Smith's Check List Lp. Bor-Am. 110 sp. 6193-5 (1903); Meyr. Pr. Z. Soc. Lond. 1908 728 (1908): Ann. Transv. Mus. 2 14-16, Pf. 5-3-6 (1909).

*Type 2: Copocercia crambinella* Z. (Z. 1877).

COPOCERCIA Z. Hor. Soc. Ent. Ross. 13 374-7 Pf. 5-129 a-b (1877).

#### 1. *Polyhymno subaequalis*, sp. n.

*Antennae* whitish, slightly tinged with bronzy brown. *Palpi* whitish. *Head* white. *Thorax* white, tinged with bronzy brown along the middle. *Forewings* shining bronzy brown, with a broad white median streak from the base, attenuated to a point beyond the end of the cell where it nearly coalesces with a small elongate white spot beneath its apex, which is succeeded by a white triangular patch before the termen; the lower angle of this is produced in a narrow marginal line along the base of the dorsal cilia, its upper angle also produced towards the apex, but shortly meeting, at an acute angle, two white costal lines, the one starting nearly from the base and leaving the costa beyond the middle, the other coming from the costa a little beyond it, and only slightly less oblique; at the angle where they meet are some silvery scales; above the acute angle which they form are three, white, wedge-shaped costal streaks, each wider than the other as they approach the apex, the third, pointing inward through the apical cilia, separated from the second by a blackish streak and ornamented at its outer end by two minute black dashes in the extremity of the apical cilia, which have thus a caudate appearance; the cilia below the bronzy brown pointed apex of the wing are also much ornamented, their base white in contrast with the narrow bronzy brown termen, some black spots lying along their middle beyond which their extremities are shining silvery grey; dorsal cilia dull greyish. *Exp. al.* 16 mm. *Hindwings* and cilia greyish brown, the latter tipped with whitish around the apex. *Abdomen* brownish cinereous. *Legs* whitish, the tarsi with four brownish spots.

*Type* ♂ (65395) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65397) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Three specimens.

The brown ground-colour of the forewings is distinctly more bronzy than in 5648 *acaciella* Busck, and the small white dash beneath the central white streak is absent.

## 2. *Polyhymno convergens*, sp. n. (Tab. II. fig. 27.)

*Antennae* hoary white. *Palpi* hoary whitish, median joint slightly clothed beneath; terminal joint longer than median, shaded beneath. *Head* hoary white. *Thorax* hoary white, with two longitudinal greyish fuscous lines. *Forewings* greyish fuscous, longitudinally streaked with hoary whitish; a broad streak from the base below the costa extending over the fold, on the middle of which it is slightly broken; an arrow-like point following the fold towards the tornus; beyond the middle of the wing two hoary streaks, arising on the fold, converge towards the apex, nearly meeting the converging ends of four similar costal streaks of which the two outer are short and cuneiform, separated and followed by dark greyish fuscous, the tail-like apex also streaked above and beneath with fuscous and white alternately; an elongate silvery patch lies within the termen, the space around it and towards the costa and subapical incision fawn-brown; the cilia on the termen whitish, tipped with greyish fuscous, with three blackish spots along their base; the long cilia above the tornus hoary greyish. *Exp. al.* 16 mm. *Hindwings* brownish grey; cilia hoary grey. *Abdomen* hoary greyish, anal tuft ochreous. *Legs* hoary greyish; hind tibiae strongly hairy above, with two longitudinal streaks of greyish fuscous on their outer sides, tarsi banded with greyish fuscous, the first band much wider than the other four.

*Type* ♂ (65398) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

Allied to 5648 *acaciella* Busck, but differing in the whitish lines converging towards the apex.

## 3. *Polyhymno colleta*, sp. n.

*Antennae* ivory-white, slightly clouded with fuscous beyond the basal third. *Palpi*, *Head*, and *Thorax* ivory-white, the latter with two slender brownish streaks along the middle. *Forewings* ivory-white, the dorsal third mottled with brown, which forms also a broken line along the fold, furcate near its outer end, the  $\sphericalangle$  running toward the apex; a rather broad brown band occurs along the costa, a slender white line running through it from before the middle of the costa to its outer and lower extremity; this is followed by a broader oblique white streak from the commencement of the costal cilia, nearly meeting the end of the slender white line below it; a pair of shorter, triangular, geminated streaks, the outer pair in the apical cilia separated by brown on the costa, the same colour running outward below them and forming a caudate apex in the cilia; preceding the termen and parallel to it are a few silvery metallic scales, the terminal cilia being ornamented by two black spots in a white patch, margined before by brown, and behind by brownish grey; dorsal cilia brownish grey. *Exp. al.* 11–12 mm. *Hindwings* pale bluish grey; cilia pale brownish grey. *Abdomen* leaden grey, whitish at the sides; anal tuft pale brownish ochreous. *Legs* ivory-white, with oblique brown streaks on the outer side of the tibiae, and brown bands across the tarsi.

*Type* ♂ (65807) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65810) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Four specimens.

## 4. *Polyhymno leucocras*, sp. n.

*Antennae* white at the base, shaded beyond. *Palpi* snow-white. *Head* and *Thorax* snow-white. *Forewings* snow-white, with a rather broad brown costal band, the dorsal space beneath the fold being also completely filled with brown, from which a brown streak is ejected outward in the direction of the apex; the white costal streaks are in the same positions as in the previous species (*colleta* Wlsm.), consisting of one long, slender, very oblique line commencing before the middle, followed by a shorter, less oblique line nearly meeting its apex, and two pairs of geminated white streaks in the costal and apical cilia; there is also a similar white patch in the terminal cilia, but instead of two black spots this contains a black

streak with two black dots below it; a reduplicated brown line runs along the termen at the base of the cilia. *Exp. al.* 9–10 mm. *Hindwings* and cilia very pale grey. *Abdomen* brownish grey. *Legs* greyish white, hind tarsi spotted with fuscous.

*Type* ♀ (35722) Mus. Wlsm. BM. [PTT. (35723, 35725) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (H. K. Morrison). Seven specimens.

### 5. *Polyhymno sciurella* Wlsm.

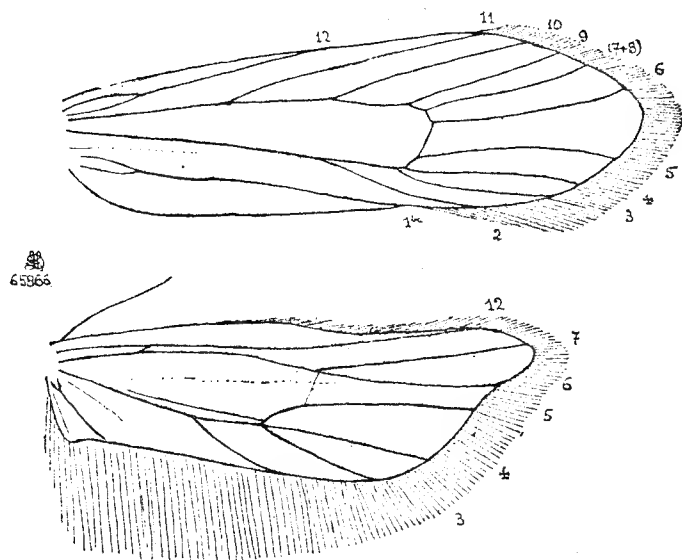
*Polyhymno sciurella* Wlsm. Pr. Z. Soc. Lond. 1897 78 sp. 56 (1897)<sup>1</sup>.

*Hab.* AMERICA, C-I. Central America—MEXICO: VERA CRUZ: Cordova, V. 1908 (F. Knab): TABASCO: Teapa, III. (H. H. Smith). West Indies<sup>1</sup>—ST. THOMAS<sup>1</sup>: 22–24, III. (F. Gudmann, W. von Hedemann)

### SIMONEURA, gen. n.

(*σιμός*=bent upwards; *νευρά*=a nerve.)

*Type*: *Simoneura ophitis* Wlsm. (Tab. II. fig. 29.)



J. H. Durrant, del.

16. *Simoneura ophitis* Wlsm. ♂.

*Antennae*  $\frac{3}{4}$ , simple; basal joint without pecten. *Labial Palpi* smooth, recurved, median joint somewhat fringed above toward the apex; terminal joint scarcely shorter than median, slender, acute. *Maxillary Palpi* short. *Haustellum* well-developed, scaled throughout. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* elongate, the costa straight, apex somewhat abruptly depressed, rounded, dorsum impressed at end of vein 1: *neuration* 11 veins; 7–8 coincident; 6 to costa, distinctly above apex; 3–4 approximate; 2 remote from 3; 5 much nearer 4 than 6; 1 basally furcate. *Hindwings* 1, trapezoidal, only slightly sinuate beneath apex, dorsum straight: *neuration* 8 veins; 6–7 connate; 3–4 connate; 5 cubital, upwardly oblique, nearer 6 on termen than on discoidal, which runs obliquely inward to lower media, immediately above origin of 3–4; 11 connecting radius to 12. *Abdomen* moderate, smooth. *Legs*: hind tibiae hairy above.

Correlated with *Untomia* Busck, *Apopira* Wlsm., and *Cathagesis* Wlsm., but differing from these and from all American genera of *Gelechiadae* yet described in FW: 6 running to the *costa*, very noticeably above the apex.



1. *Simoneura ophitis*, sp. n. (Tab. II. fig. 29.)

*Antennae* pale greyish brown. *Palpi* pale steel-greyish, slightly shaded on the outer side of the median joint. *Head* and *Thorax* greyish brown; face steel-grey. *Forewings* greyish brown, with a conspicuous, yellowish white, serpentine patch at the apex, extending downward to the tornus and through the tornal cilia; above it is a minute, white, outwardly oblique costal streak, beyond which the dark ground-colour is attenuate outward in a narrow marginal line curving around the apex; parallel and adjacent to this line one still narrower, whitish ochreous in colour, separates it from a broader brownish ochreous band running through the cilia, following the curve around the apex; the outer portion of the cilia white, narrowly tipped with grey, thus giving the appearance of five distinguishable lines of different shades of colour enclosing the apex. *Exp. al.* 10 mm. *Hindwings* and cilia pale greyish brown, a paler, slender dividing line running along the base of the cilia. *Abdomen* dark greyish brown; anal tuft slightly ochreous. *Legs* greyish brown, the ends of the tibiae and the joints of the tarsi pale cinereous.

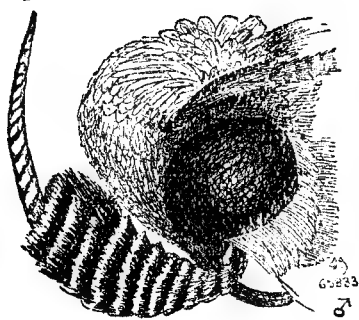
*Type* ♂ (65862) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PTT. (65864-5) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (H. H. Smith). Five specimens.

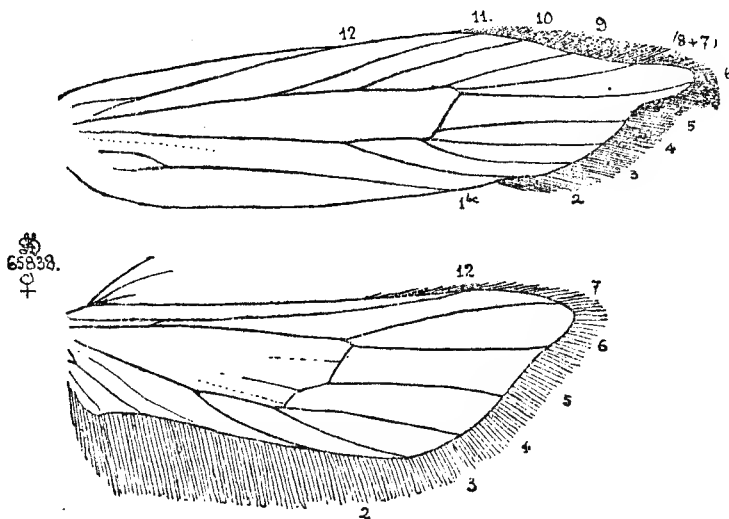
## APOPIRA, gen. n.

(ἀπόπειρα = probation.)

*Type*: *Gelechia falcatella* Wkr. (Tab. II. fig. 14.)



J. H. Durrant, del.



17. *Apopira falcatella* Wkr. ♂, ♀.

*Antennae*  $\frac{3}{4}$ , simple; basal joint without pecten. *Labial Palpi* recurved; median joint somewhat flattened, and widened with smooth scales disposed in annular ridges projecting slightly on its upper side, smooth beneath; terminal joint not longer than median, slender, erect. *Maxillary Palpi* short. *Haustellum* scaled. *Ocelli* absent. *Head* and *Thorax* smooth. *Forewings* narrow, elongate, scarcely widened apically. *Apical cilia* falcate: outward, apex but slightly depressed, subfalcate, termen sinuate beneath apex, apical cilia falcate: *neuration* 11 veins; 7-8 coincident, to costa; 6 almost connate with (7+8), running to immediately below apex; 5 and 3 approximate to 4; 2 remote. *Hindwings* trapezoidal, widening outward, termen not sinuate beneath apex: *neuration* 8 veins; 3-4 approximate, 4 from lower angle of cell, 3 from before angle (with a lens only, 3-4 would be described as connate, but under the microscope they are as described); 5 about midway between 6 and 4, discoidal angulated inward at internal vein between 5-4; 6-7 separate, but approximated; 12 connected to radius by 11. *Abdomen* slender. *Legs*: hind tibiae with a patch of hairs on their basal half above.

Allied to *Aproaerema* Drnt. and *Polyhymno* Chmb., differing from the former in the loss of a vein in the forewings, by coincidence of FW:7-8; from the latter

in HW: 3-4 being connate, not stalked; and from both in HW: 6-7 being separate, not stalked.

1. **Apopira falcatella** Wkr. (Tab. II. fig. 14.)

*Gelechia falcatella* Wkr. Cat. Lp. BM. 29 625 sp. 295 (1864)<sup>1</sup>.

*Antennae* greenish fuscous, delicately annulate with white. *Palpi* dark greenish fuscous, distinctly and closely annulate with white throughout. *Head* and *Thorax* bluish green; face shining, cinereous. *Forewings* bluish green, the costa smeared with dark brown from near the base to the apex; a slender, oblique, whitish line runs outward from the commencement of the costal cilia to a point opposite the apex, whence it is angulate and diffused downward, losing itself in the paler greenish ground-colour; the extreme apex is tinged with ferruginous, a reduplicated pale line marking the base of the dark brown cilia, in which, at the extreme apex, are three streaklets running downward through the projecting point, which gives them a strong uncate appearance; the termen is preceded by three or four short longitudinal dark streaklets, and there is a dark spot in the cilia below the apex. *Exp. al.* 10-12 mm. *Hindwings* brown, shading to dark brown outwardly; bluish white on the basal two-thirds beneath. *Abdomen* brown above, silvery white beneath. *Legs* dark brownish grey; tibiae laterally streaked with silvery white, tarsi faintly annulate with white.

*Type* ♀ (1858: 6 *Ega*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: VERA PAZ: Panima, 1879 (*G. C. Champion*). South America—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*)—BRAZIL: AMAZONS: *Ega* (*H. W. Bates*)<sup>1</sup>.

UNTOMIA Busck.

*Type: Untomia untomiella* Busck (Busck 1906).

UNTOMIA Busck Pr. US. Nat. Mus. 30 727 tf. 727.5 (1906): Pr. Ent. Soc. Wash. 9 86-7 (1908).

1. **Untomia alticolens**, sp. n.

*Antennae* whitish, annulate with fawn-brown beyond the base. *Palpi* recurved, slender, median joint thickened above, and tufted at its apex; dark brown at the base, the tuft and terminal joint white. *Head* pale fawn-grey; face whitish. *Thorax* pale fawn-grey. *Forewings* pale fawn, shaded and blotched with dark chocolate-brown, the costa to one-third white, with a dark brown spot at the extreme base; before the middle of the costa commences an elongate dark chocolate-brown patch which extends to the commencement of the costal cilia, before which it is interrupted by a short outwardly oblique white costal streak; the fawn-brown colour, spreading at the base over two-thirds of the wing-width, contains two dark suffused spots on the fold, the second followed by some whitish scales; there is a small dark spot on the cell before the middle, and a second somewhat obliquely placed at the end of the cell, the latter followed by a whitish space, the whole dorsal half of the wing being slightly sprinkled with dark scales; before the apex a dark chocolate-brown spot precedes a margined line of the same colour along the base of the cilia which are whitish in the middle, tipped with chocolate-brown. *Exp. al.* 12-14 mm. *Hindwings* pale grey, marked at the apex somewhat as in the forewings; cilia faintly shaded with fawn-grey. *Abdomen* brownish grey; anal tuft slightly paler. *Legs* greyish, the hind tarsi whitish at the joints.

*Type* ♂ (65867, *S. de las Aguas Escondidas*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65869, 65872-3) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*); Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Eight specimens.

2. *Untomia latistriga*, sp. n. (Tab. II. fig. 30.)

*Antennae* whitish ochreous, annulate with dark brown. *Palpi* white, the median joint black nearly to its apex; terminal joint tipped with black. *Head* and *Thorax* whitish ochreous, somewhat suffused with brownish fuscous above. *Forewings* whitish ochreous, a black spot at the base of the costa, produced in a narrow line along the costa to beyond one-third, where it is dilated into a broad patch shaded with brown along its lower edge, and continued to the commencement of the costal cilia; here is a rather widened, obliquely outward-curved, white costal streak, separated by a narrow brown space from a smaller, oblique, straight white streak preceding the semicircular black line which follows the margin of the evenly rounded apex and termen through the base of the whitish ochreous cilia, which are tipped with greyish fuscous; there is a slight brownish fuscous suffusion along the dorsal half of the wing, and this is speckled with darker fuscous, notably in a narrow spot before the middle of the fold and in a short oblique patch arising from the flexus. *Exp. al.* 12 mm. *Hindwings* trapezoidal, slightly dilated outward, apex obtuse, termen scarcely emarginate; shining leaden grey; cilia leaden grey, with a pale line along their base. *Abdomen* greyish fuscous. *Legs* greyish fuscous, with four pale tarsal annulations.

*Type* ♂ (65875) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: MORELOS: Cuernavaca, VI. (*H. H. Smith*). Unique.

Closely allied to *rotundata* Wlsm., but differing in its larger size, in the broader and more curved first white costal streak, in the absence of a conspicuous dorsal patch before the middle and of slender lines of blackish scales above the tornus.

3. *Untomia acuminata*, sp. n. (Tab. II. fig. 31.)

*Antennae* ivory-white at the base, shaded with fuscous on the outer half. *Palpi* smooth, recurved, terminal joint scarcely more than half as long as the median; blackish, except on the outer half of the terminal joint which is white. *Head* and *Thorax* ivory-white. *Forewings* elongate, narrow, the costa slightly raised near the base, thence flat to the somewhat depressed acuminate apex; ivory-white, with three diffused fuscous dorsal patches—the first short at the flexus, the second before the middle, obliquely triangular, its apex crossing the fold, a third small and indistinct close to the tornus; along the costa is a slender blackish streak at the base, and a narrow outwardly dilated dark brown costal shade beyond the middle, through which runs a very oblique white line to a conspicuous black spot at the apex; beneath this spot the cilia are ivory-white, with a small transverse black streak descending through them from the apex and nearly joining a streak of brown scales projecting below it from a slender terminal line of the same; underside clouded with fuscous, a slender black streak at the extreme apex. *Exp. al.* 13 mm. *Hindwings* and cilia pale brownish grey, with a whitish spot at the produced apex. *Abdomen* whitish ochreous. *Legs* white; hind tarsi with black spots.

*Type* ♂ (65852) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

4. *Untomia rotundata*, sp. n.

*Antennae* olivaceous fuscous above, white beneath, the tip white. *Palpi* white, the median joint black nearly to its apex; terminal joint as long as the median, slightly smoky around its apex. *Head* and *Thorax* olive-grey, face white. *Forewings* with the costa slightly raised near the base, thence straight, apex and termen evenly rounded; whitish ochreous, slightly suffused with brownish olivaceous; along the base of the dorsum is a strong brownish patch reaching to beyond one-third, its outer end becoming nearly black, produced upward and outward to a point on the middle of the wing; beyond it above the tornus are two or three slender black lines, of which the upper one is curved; the outer half of the costa is black, the inner edge of the black patch obliquely defined from a little before the middle, in it are two short oblique whitish streaks before the rounded apex, which is marked by a semicircular black line

extending around the termen at the base of the whitish ochreous cilia, which are nearly black on their outer half above the middle; on the extreme base of the costa is a short black streak. *Exp. al.* 8.5 mm. *Hindwings* rather narrow at the base, trapezoidal, apex produced, termen scarcely emarginate; dull grey, suffused with brownish fuscous; cilia pale brownish grey. *Abdomen* olivaceous grey. *Legs* grey, with narrow whitish tarsal bands.

*Type* ♂ (65843) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65848-50) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Nine specimens.

### 5. *Untomia symphora*, sp. n. (Tab. II. fig. 32.)

*Antennae* whitish, delicately annulated with fuscous. *Palpi* white, the median joint somewhat spreading at its apex, black on its outer side, a narrow rim of white at its extremity, terminal joint shorter than the median. *Head* whitish, tinged with grey above. *Thorax* tinged with grey, tegulae whitish. *Forewings* whitish on the costal half towards the base, becoming greyish towards the dorsum and brownish ochreous about and beyond the end of the cell; at the extreme base of the costa is a slender black streak, followed by a very short oblique black streak at one-fourth and a broader oblique black streak at the middle; this is separated by a narrow oblique white streak from an elongate blackish costal blotch, which is somewhat triangular and terminates in a curved reduplicated blackish line in the apical cilia; this blotch contains an outwardly oblique slender line, pointing to a small black spot in a white patch before the apex, another slender white line meeting it at an angle from the dorsum; a small pale space on the fold at about half the wing-length contains a few blackish scales; terminal cilia hoary, speckled with greyish fuscous. *Exp. al.* 7 mm. *Hindwings* greyish brown; cilia with a curved shade-line near their outer ends at the apex. *Abdomen* shining, greyish brown. *Legs* greyish; hind tarsi annulate with white and fuscous.

*Type* ♂ (65821) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

This species differs from *rotundata* Wlsm. in FW: 7-8 being furcate close to the costa, not coincident throughout.

### 6. *Untomia horista*, sp. n.

*Antennae* cream-colour, distinctly annulate with brown. *Palpi* with the broadly scimitar-shaped median joint dark brown externally, its inner side and apical margin white; terminal joint slender, white. *Head* and *Thorax* cream-colour, the outer half of the tegulae dark brown. *Forewings* dark umber-brown, with the exception of the dorsal third which is cream-colour, with a slight brownish ochreous tinge beyond the middle; at, and a little before the termen, the pale portion becomes wider than the dark portion, which is angulated upward from above the tornus; from the commencement of the costal cilia runs a slender outwardly oblique whitish line through the dark brown, to the upper extremity of a slender tridentate dark brown line which reverts to the tornus a little before the termen; a dark brown line runs through the base of the pale cream-coloured cilia around the apex and termen, narrowly margined with cream-colour on its inner side, giving the apex an extremely rounded appearance. *Exp. al.* 8 mm. *Hindwings* as broad as the forewings, the termen obliquely sinuate, apex obtuse; together with the cilia pale brownish grey. *Abdomen* brownish grey. *Legs* creamy; hind tarsi with five dark shade-bands.

*Type* ♂ (65839) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65840) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Four specimens.

### 7. *Untomia cryptina*, sp. n.

*Antennae* tawny fuscous, with faint paler annulations. *Palpi* pale, shining steel-grey, the median joint slightly thickened, and scarcely roughened above toward its apex. *Forewings* dark tawny brownish

fuscous, slightly bestrewn with steely grey scales; with a slender pale steel-grey streak running obliquely outward from the commencement of the costal cilia to a little below the apex, where it is angulated and continued indistinctly to the tornus; cilia dark tawny fuscous, with a darker line running through them near their base. *Exp. al.* 8–9 mm. *Hindwings* and cilia dark bronzy brownish. *Abdomen* dark bronzy brown. *Legs* brownish cinereous.

*Type* ♂ (65853) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65859–61) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Nine specimens.

This species may be recognised by the separation of veins FW: 3–4.

### 8. *Untomia cenelpis*, sp. n. (Tab. II. fig. 34.)

*Antennae* pale cinereous, with dark greenish grey annulations. *Palpi* whitish cinereous, the median joint blackish nearly to its apex externally; the slightly longer terminal joint with two blackish annulations, one at the base, the other before the apex. *Head* and *Thorax* dull greenish olivaceous; face pale cinereous. *Forewings* dark greenish olivaceous, with minute paler speckling and some blackish patches and suffusion; a small black spot at the extreme base of the costa is followed by a second costal spot before one-third; an elongate costal spot precedes the middle, and there is a larger one beyond the middle, pointing downward to an obscure spot at the end of the cell, and forming, at its outer edge, the margin of a slender pale olivaceous line crossing the wing from the costal to the dorsal cilia; this line is angulated inward on its upper half and outward at its middle, thence descending straight to the dorsum; beyond it are two or three blackish spots before the evenly rounded apex, and there is some indication of a similar spot on the fold before its middle—none of the markings are clearly defined; cilia dark greenish olivaceous, a slight shade-line along their base above the apex. *Exp. al.* 10 mm. *Hindwings* trapezoidal, with obtuse apex; brownish fuscous; cilia slightly paler along their base. *Abdomen* dark greyish fuscous. *Legs* greyish fuscous; hind tarsi with three faint pale annulations.

*Type* ♂ (65819) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

In this species FW: 7–8 are stalked.

### 9. *Untomia concinnella* Chmb.

=†*concinnusella* Chmb.; †*concinnisella* Chmb.; †*concinusella* Chmb., Busck.

*Gelechia concinnusella* Chmb. Cin. Qr. Jr. Sc. 2 253–4 (1875)<sup>1</sup>. *Gelechia concinnisella* Chmb. Bull. US. GG. Surv. 3 127 (1877)<sup>2</sup>. *Gelechia concinusella* Chmb. Bull. US. GG. Surv. 4 142 (1878)<sup>3</sup>; Hgn-Frey Pap. 4 98 (1884)<sup>4</sup>; Riley, Smith's List Lp. Bor-Am. 100 sp. 5340 (1891)<sup>5</sup>. *Aproaerema concinusella* Busck Bull. US. Nat. Mus. 52 509 sp. 5700 (1902)<sup>6</sup>; Pr. US. Nat. Mus. 25 841, 843–4 (1903)<sup>7</sup>; Krft. Smith's Check List Lp. Bor-Am. 110 sp. 6201 (1903)<sup>8</sup>.

*Hab.* AMERICA, N-C. United States<sup>1–8</sup>. ATLANTIC STATES<sup>6</sup>—TEXAS<sup>1–2, 4, 7</sup>: BOSQUE: 9. X. 1876 (*G. W. Belfrage*)—COLORADO<sup>2, 6–7</sup>: EL PASO: Edgerton, VI<sup>2</sup>. CALIFORNIA: COLUSA: Bear Valley, 27. VI. 1871 (*Wlsm.*): SHASTA: Pit River, 21–6. VII. 1871 (*Wlsm.*). Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*).

This species is congeneric with 5699 *nigratomella* Clms., and *mercedella* Wlsm. [Pr. Z. Soc. Lond. 1907 934–5 Pf. 51·11 (1908) *Tenerife*): all three species have FW: 7–8 stalked, and 3–4 separate.

10. *Untomia? pantalaena*, sp. n. (Tab. II. fig. 33.)

*Antennae* of the ♂ slightly biserrate towards the apex; brownish ochreous. *Palpi* with the median joint dark umber-brown, except at its apex; this and the shorter terminal joint pale ochreous. *Head* and *Thorax* brownish ochreous, the latter with a tawny suffusion on the middle. *Forewings* elongate, obtusely lanceolate; brownish ochreous, paler along the costa, with a tawny suffusion spreading from the base below the middle to the apex and dorsum, and minutely speckled with blackish scales; at the commencement of the costal cilia is a blackish spot; there is a smaller one in the middle of the fold; a very small one at the base of the costa, and a faint indication of another a little beyond the end of the cell; a few blackish scales are distributed around the obtuse apex and obliquely rounded termen, before the brownish ochreous cilia. *Exp. al.* 10 mm. *Hindwings* trapezoidal, somewhat dilated outward, apex obtusely pointed, termen slightly emarginate; together with the cilia dull brownish fuscous. *Abdomen* brownish fuscous. *Legs* brownish fuscous externally, brownish ochreous on their inner sides; hind tarsi with pale annulations.

*Type* ♂ (65820) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: TABASCO; Teapa, III. (H. H. Smith). Unique.

This species is only included provisionally in *Untomia* Busck, the limits of which are at present under revision. The neurulation of *pantalaena* Wlsm. is as follows:—FW: 12 veins; 7-8 stalked, to costa; 2-4 separate: HW: 8 veins; all separate.

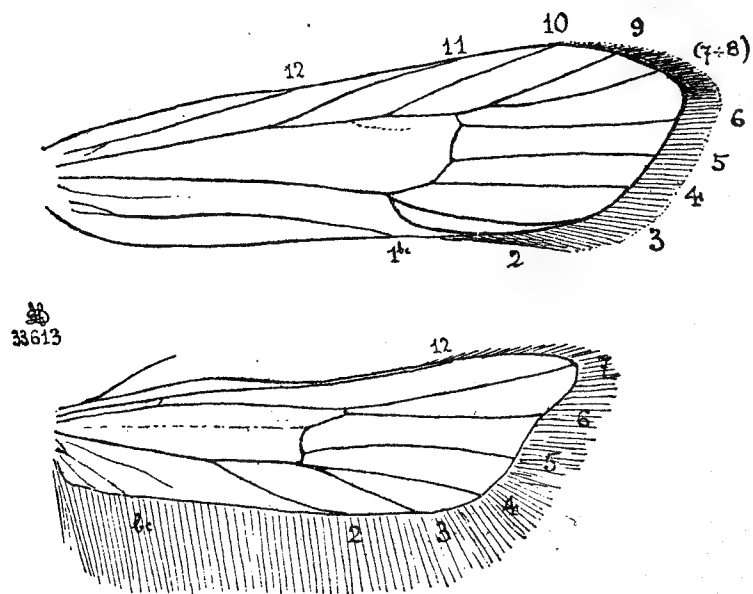
PARANOEA, gen. n.

(παράνοια = derangement.)

*Type*: *Paranoea latescens* Wlsm. (Tab. II. fig. 28.)



J. H. Durrant, del.



18. *Paranoea latescens* Wlsm. ♂.

*Antennae* ♂ rather stout, slightly serrate, biciliate ( $\frac{1}{2}$ ), nearly as long as the forewings; basal joint without pecten. *Labial Palpi* smooth, recurved, median joint somewhat thickened above and beneath with closely appressed scales, sharply cut off at apex; terminal joint not longer than median, acute. *Maxillary Palpi* short, converging. *Haustellum* well-developed. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* elongate, costa straight, apex depressed, moderately pointed, dorsum parallel with costa: neurulation 11 veins; 7-8 coincident, to costa; 9 stalked with (7+8); 2-3 short-stalked; rest separate. *Hindwings* 1, somewhat trapezoidal, widening outward, termen slightly angulate beneath apex; cilia 1<sup>+</sup>: neurulation



8 veins; 3-4 connate, or short-stalked; 5 cubital; discoidal angulated inward at internal vein between 5 and 6; 6-7 truncate; 11 connecting radius to 12. *Abdomen* smooth. *Legs*: hind tibiae slightly hairy above.

A development of the *Dichomeris-Trichotaphe* group, distinguished from its allies by the stalking of FW: 9 and (7+8).

### 1. *Paranoea latescens*, sp. n. (Tab. II. fig. 28.)

*Antennae* cream-colour. *Palpi* cream-colour, the median joint shaded nearly to its apex externally with very pale chestnut-brown. *Head* and *Thorax* cream-whitish. *Forewings* cream-colour, with a slight yellowish tinge; a pale chestnut-brown costal blotch beyond the middle is followed by a series of small chestnut-brown dots around the apex and termen, at the base of the creamy yellowish cilia; a faint chestnut dot lies at the end of the cell. *Exp. al.* 8 mm. *Hindwings* and cilia pale greyish cinereous. *Abdomen* brownish grey; anal tuft cream-whitish. *Legs* cream-whitish.

*Type* ♂ (65697, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65698) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Cordova, XII. 1907 (*F. Knab*): TABASCO: Teapa, III. (*H. H. Smith*). Three specimens.

## STROBISIA Clms.

*Type*: *Strobisia iridipennella* Clms. (Busck 1903). (Tab. II. fig. 35.)

STROBISIA Clms. Pr. Ac. Nat-Sc. Phil. **12** 164-5 (1860): Clms-Stn. Tin. N-Am. pp. x, 40, 117-9, 207 (1872); Wkr. Cat. Lp. BM. **29** 777-8 (1864); Chmb. Bull. US. GG. Surv. **4** 162 (1878): Jr. Cin. Soc. NH. **2** 198 ff. 202-12 (1880); Frey Stett. Ent. Ztg. **39** 250-2 (1878); Wlsm. Moore's Lp. Ceyl. **3** 518-9 Pf. **209**·6 (1887): Tr. Ent. Soc. Lond. **1891** 97-8 Pf. **4**·34, **7**·79 (1891); Riley, Smith's List Lp. Bor-Am. 104 sp. 5580-5 (1891); Busck Bull. US. Nat. Mus. **52** 505 sp. 5653-4 (1902): Pr. US. Nat. Mus. **25** 772, 904-5 Pf. **31**·31-2 (1903); Krft. Smith's Check List Bor-Am. 112 sp. 6333-4 (1903); Meyr. Tr. Ent. Soc. Lond. **1909** 23 (1909).

### 1. *Strobisia iridipennella* Clms. (Tab. II. fig. 35.)

= † *iripennella* Chmb.; = † *irridipennella* Busck; = † *aphroditeella* Chmb.<sup>5-6</sup>; = † *aphroditella* Frey.

*Strobisia iridipennella* Clms. Pr. Ac. Nat-Sc. Phil. **12** 164 (1860)<sup>1</sup>: Clms-Stn. Tin. N-Am. pp. x, 37 no. 30, 40, 118 (1872)<sup>2</sup>; Wkr. Cat. Lp. BM. **29** 778 (1864)<sup>3</sup>. *Strobisia aphroditeella* Chmb. Can. Ent. **4** 88-9 (1872)<sup>4</sup>. *Strobisia iridipennella* Chmb. Can. Ent. **7** 7 (1875)<sup>5</sup>. *Strobisia iripennella* Chmb. Bull. US. GG. Surv. **4** 162 (1878)<sup>6</sup>. *Strobisia aphroditella* Frey Stett. Ent. Ztg. **39** 251 (1878)<sup>7</sup>. *Strobisia iridipennella* Frey Stett. Ent. Ztg. **39** 251 (1878)<sup>8</sup>; Riley, Smith's List Lp. Bor-Am. 104 sp. 5583 (1891)<sup>9</sup>; Dietz, Smith's List Ins. New Jersey 474 (1900)<sup>10</sup>. *Strobisia irridipennella* Busck Bull. US. Nat. Mus. **52** 505 sp. 5653 (1902)<sup>11</sup>: Pr. US. Nat. Mus. **25** 904-5, 937 Pf. **31**·31 (1903)<sup>12</sup>: Pr. Ent. Soc. Wash. **5** 200 (1903)<sup>13</sup>. *Strobisia iridipennella* Krft. Smith's Check List Lp. Bor-Am. 112 sp. 6333 (1903)<sup>14</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-14</sup>—ATLANTIC STATES<sup>11</sup>—PENNSYLVANIA<sup>[1-2]</sup>—NEW JERSEY<sup>10</sup>—DISTRICT OF COLUMBIA (*A. Busck*)<sup>12</sup>—KENTUCKY<sup>4</sup>—NORTH CAROLINA: 1884 (*H. K. Morrison*)—FLORIDA: 1883 (*H. K. Morrison*)—TEXAS: DALLAS: Dallas,

13. VI. (*J. Boll; Stn. Coll., & Mus. Wlsm.*). Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*).

A single specimen, in poor condition, from Teapa (65694), is easily recognised as *iridipennella*.

Chambers<sup>(5-6)</sup> rightly sunk *aphroditeella* Chmb. as a synonym of *iridipennella* Clms. (his type of *aphroditeella*, in the Museum of the Peabody Academy of Science, Salem, Mass., was examined in 1881 and this identification confirmed), but *proserpinella* Frey and Boll was wrongly regarded as synonymous by Busck<sup>(11-12)</sup>. We have compared the type of *proserpinella* with specimens of *iridipennella* determined by Clemens, and now recognise *proserpinella* as a good species, separable from *iridipennella* without difficulty by the distinct large iridescent dorsal streak, intermediate between the second and third costal streaks; in *iridipennella* this streak is replaced by four small iridescent spots arranged rectangularly, that on the dorsum, sometimes less conspicuous than those above it, being preceded and followed by others in a more or less continuous series parallel with the termen.

[*Strobisia proserpinella* Frey & Boll.

=\**iridipennella* Chmb.; =†*irridipennella* (p.) Busck.

*Strobisia iridipennella* Chmb. Can. Ent. 7 7 (1875)<sup>1</sup>. *Strobisia proserpinella* Frey & Boll Stett. Ent. Ztg. 39 251-2 (1878)<sup>2</sup>; Riley, Smith's List Lp. Bor-Am. 104 sp. 5585 (1891)<sup>3</sup>. *Strobisia irridipennella* (p.) Busck Bull. US. Nat. Mus. 52 505 sp. 5653 (1902)<sup>4</sup>; Pr. US. Nat. Mus. 25 904-5 (1903)<sup>5</sup>. *Strobisia iridipennella* (p.) Krft. Smith's Check List Lp. Bor-Am. 112 sp. 6333 (1903)<sup>6</sup>.

*Hab.* AMERICA, N. United States<sup>1-6</sup>—MISSOURI: ST. LOUIS: Kirkwood, 7. VII. 1884 (*M. Murtfeldt*)—TEXAS<sup>1-6</sup>: DALLAS<sup>2</sup>: Dallas<sup>2</sup>: 24-27. IV. (*J. Boll; Stn. Coll.*), 6. VI. (*J. Boll; Zell. Coll.*): MC. LENNAN: WACO, 30. IV. 1868 (*G. W. Belfrage; Stn. Coll.*): BOSQUE<sup>1</sup>: (*G. W. Belfrage*)<sup>1</sup>.

Chambers<sup>(1)</sup> remarked that the single specimen of *iridipennella* received from Belfrage, from Bosque County, Texas, differed in having "a less number of the blue spots" than any he had seen: this specimen was doubtless *proserpinella*, of which there is a specimen in the Stainton Collection, also received from G. W. Belfrage.

*Strobisia proserpinella* has not yet been met with in Central America, but Boll took both species at Dallas (Texas) and it may be expected to occur further South.]

## 2. *Strobisia walkeri*, sp. n.

*Antennae* leaden grey. *Palpi* pale leaden grey. *Head* and *Thorax* leaden grey. *Forewings* with a leaden grey basal patch, merging outwardly into tawny purplish fuscous, which reaches to one-third and is bounded on the costa by a cuneiform white costal streak, while from its lower half it sends obliquely upward a sharp steel-grey tooth-like projection into the deep brownish orange band which succeeds it; from each extremity of the white costal streak a dark steel-grey point also projects outward; the broad orange band into which these project is bounded a little beyond the middle of the wing by a rather oblique bright steel-grey fascia, narrowly margined on either side by black, and rather wider on the dorsum than on the costa; this again is succeeded by a deep reddish orange fascia, narrower than the preceding orange band, but somewhat produced outward on the dorsum; above this dorsal extension

# HETEROCERA.

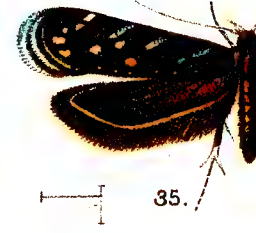
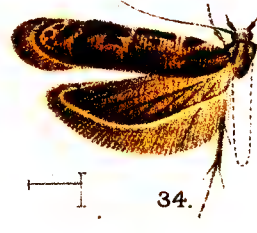
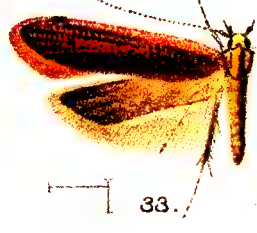
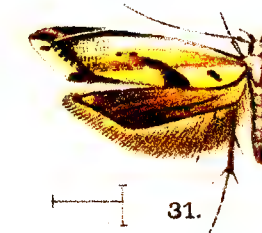
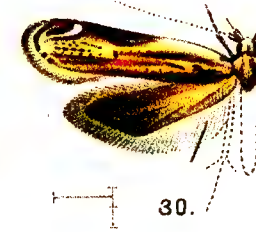
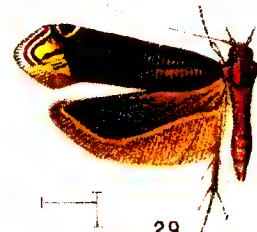
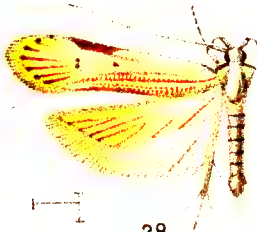
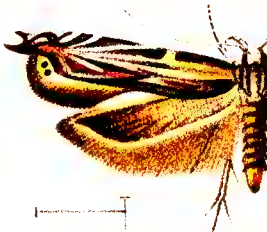
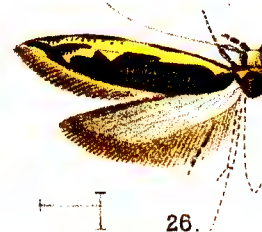
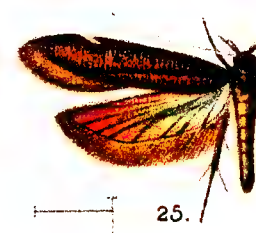
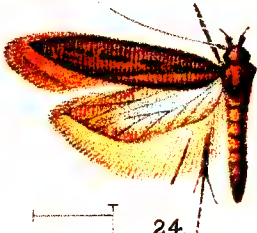
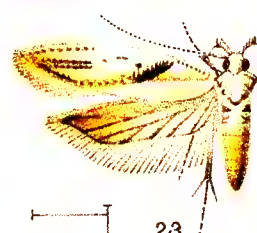
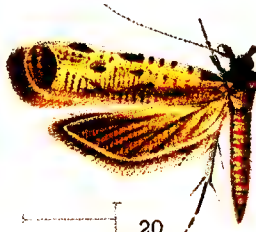
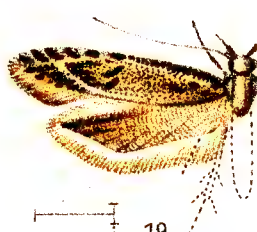
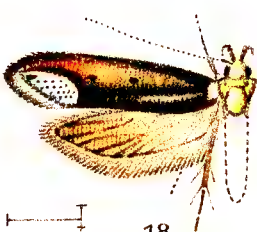
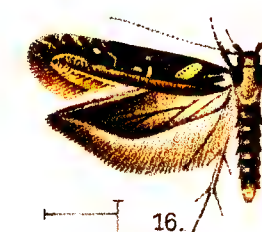
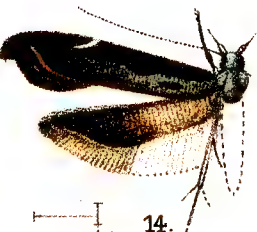
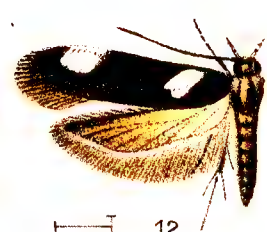
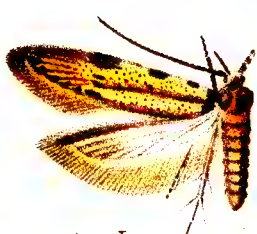
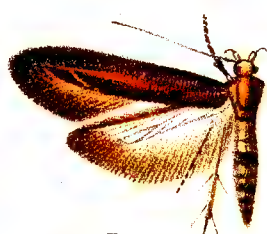
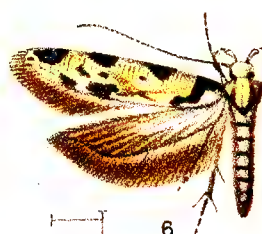
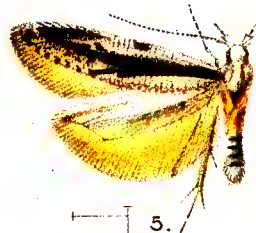
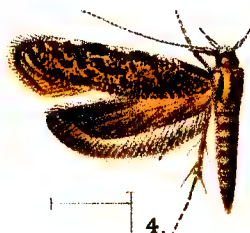
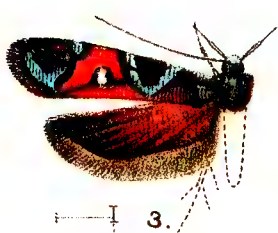
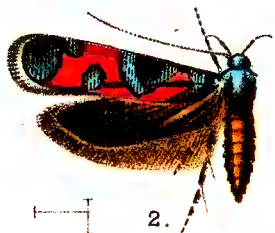
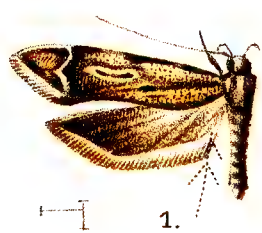
## TINEINA.

### PLATE II.

#### GELECHIADAE.

Fig.				Page
1.	<i>Anacampsis succincta</i> Wlsm.	.... (Type ♂ 65709)	Teapa, Mexico	38
2.	<i>Anacampsis suffectella</i> Wkr.	- - - (♀ 5838, US. Nat. Mus.)	Tabernilla, Panama	41
3.	<i>Anacampsis suffectella</i> Wkr.	..... (Type ♂ 1858:6, BM.)	Ega, Brazil	41
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5.	<i>Recurvaria thysanota</i> Wlsm.	..... (Type ♂ 65786)	Amula, Mexico	45
6.	<i>Recurvaria picula</i> Wlsm.	- - - - (Type ♂ 5978, US. Nat. Mus.)	Cordova, Mexico	46
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22.	<i>Gelechia concinna</i> Wlsm.	- - - - (Type ♂ 65661)	Amula, Mexico	66
23.	<i>Gelechia impurgata</i> Wlsm.	..... (Type ♀ 35636)	Sonora, Mexico	67
24.	<i>Gelechia hetaeria</i> Wlsm.	- - - - (Type ♂ 65688)	Orizaba, Mexico	68
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is a deep blackish patch extending to the costa and produced outward nearly to the apex, this contains a pair of rather converging silvery white costal streaks and a small spot of steel-grey towards its lower extremity, the space beyond it to the apex and termen, including the cilia, being rich shining purple. *Exp. al.* 12 mm. *Hindwings* dark coppery brown; cilia purplish grey. *Abdomen* brownish fuscous. *Legs*: hind tibiae shining, brownish grey, with a white annulus at their end; the tarsi darker, with the terminal joint white.

*Type* ♀ (2318) Mus. Wlsm. BM. [PT. (4914, Drnt. Det. 1906) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—PANAMA: PANAMA: Panama, 7. X - 26. XI. 1881 (*J. J. Walker*) and (*Coll. Beutenmüller, US. Nat. Mus.*). South America—COLOMBIA: MAGDALENA: Santa Marta, 1865 (*P. Bouchard; Stn. Coll.*). Three specimens.

I am indebted to Commander J. J. Walker for this, as well as for many other very interesting forms: it is of much the same appearance as several species collected on the Amazons by Bates, and described from specimens in the British Museum by Francis Walker, but does not agree with any in the distribution of its beautifully distinct markings.

### 3. *Strobisia scintillula*, sp. n. (Tab. III. fig. 1.)

*Antennae* brownish above, ochreous beneath; slightly serrate towards the apex. *Palpi* white on their inner sides, tinged with grey externally, especially at the end of the median joint; apical joint inclining to ochreous. *Head* and *Thorax* brownish fuscous. *Forewings* dark brown, with a bright steel-blue spot at the base of the costa, a slender, outwardly curved steel-blue line at one-fifth from the base, two white costal streaklets, one before and one beyond the middle, beneath which are three steel-blue spots, two on the cell and one beneath the fold, and a wide steel-blue band before the termen projecting inwards above the middle; along the margin beyond this an ochreous band runs to the apex, separated from the whitish apical cilia by a dark line; cilia on the lower half of the termen dark greyish fuscous; the basal patch within the first blue line, and the central fascia indicated by the white costal streaks, are very slightly paler than the ground-colour. *Exp. al.* 10 mm. *Hindwings* brown; cilia slightly paler. *Abdomen* fuscous, banded transversely with steel-grey; white beneath. *Legs* fuscous, with white patches at the extremities of the tibiae, and small white spots on the tarsal joints; spurs white.

*Type* ♂ (65695) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

### 4. *Strobisia argentifrons*, sp. n. (Tab. III. fig. 2.)

*Antennae* dark brown, with slender pale annulations. *Palpi* very slender, moderately recurved, terminal joint as long as median; whitish. *Head* and *Thorax* dark bronzy brown; face silvery. *Forewings* dark bronzy brown, with a slight leaden grey sheen at the base, extending to the dorsum below the fold, followed at one-third by an oblique leaden grey costal spot, beyond which are two silvery costal streaks, one at three-fifths, and one before the apex, both tending obliquely outward; the dark brown cilia have a pale line at their base, a rather wider line beyond their middle reaching around their apex. *Exp. al.* 8 mm. *Hindwings* 1, sinuate below the rounded apex; pale bronzy brown, with a reduplicated pale line in the cilia, at the apex only. *Abdomen* dark brown, with a cupreous spot at the base above; silvery white on the underside. *Legs* dark brown; hind tibiae with broad white bands, corresponding to each pair of spurs which are also white; tarsi with three white spots at the joints, and one at the end of the last joint.

*Type* ♂ (65696) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

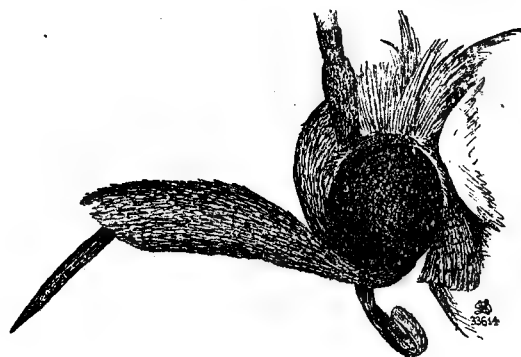
*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

BIOL. CENTR.-AMER., Heter., Vol. IV., October 1911.

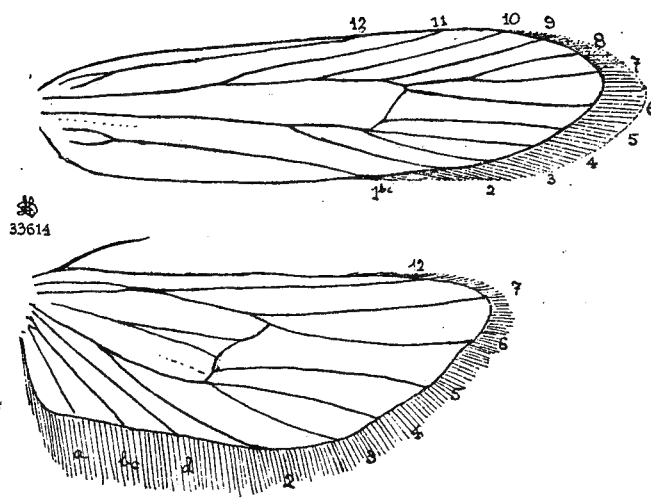
mm

## AEROTYPIA, gen. n.

(ἀήρ = the air; τύπης = a striker.)

Type: *Aerotypia pleurotella* Wlsm. (Tab. III. fig. 3.)

J. H. Durrant, del.

19. *Aerotypia pleurotella* Wlsm. ♂.

*Antennae*  $\frac{3}{4}$ , slightly serrate in ♂; basal joint smooth, without pecten. *Labial Palpi* porrect, nearly four times as long as the head; median joint slightly bent over, clothed above and below with long appressed scales; terminal joint half as long as the median, slightly clothed, smooth. *Maxillary Palpi* minute. *Haustellum* strongly developed, smooth. *Ocelli* absent. *Head* and *Thorax* smooth. *Forewings* narrow, elongate, costa and dorsum parallel, apex obtusely pointed, termen oblique, evenly rounded: *neuration* 12 veins; 7-8 stalked, to costa; 6 approximate to 7; 5 remote from 6, approximate to 4; 3-4 closely approximate; 2 from outer fourth of cell; 1 basally furcate. *Hindwings* broader than forewings, termen oblique, subsinuate, tornus evenly rounded: *neuration* 8 veins; 6-7 approximate at base, thence diverging; 3-4 connate, or short-stalked; 5 cubital, nearer 6 on termen than on discoidal which is bent inward between them; 12 anastomosing with radius at middle of cell, thence diverging, straight. *Abdomen* and *Legs* smooth.

A peculiar genus, of which the ♀ is unfortunately unknown and consequently its relationship is obscure. The porrect palpi of the ♂, and the anastomosis of HW: 12 with the radius, should render it easy of recognition.

1. *Aerotypia pleurotella*, sp. n. (Tab. III. fig. 3.)

*Antennae* and *Palpi* pale ochreous. *Head* and *Thorax* whitish ochreous; the tegulae streaked with darker olivaceous ochreous. *Forewings* ochreous, fading to ochreous white from below the middle to the dorsum; from the base below the costa to the apex runs a straight white streak of even width throughout; above it the ochreous ground-colour is tinged with pale olivaceous fuscous to the costa, as also narrowly along its lower margin, making it very clearly defined; cilia whitish, tinged with ochreous, especially at the apex and on the costa; underside fuscous, with cream-white cilia. *Exp. al.* 40-42 mm. *Hindwings* sericeous, pale brownish fuscous, tending to fade to paler from costa to dorsum; cilia whitish, with a faint ochreous tinge; underside fuscous, with cream-white cilia. *Abdomen* very pale brownish fuscous. *Legs* creamy whitish, shaded above with pale brownish fuscous.

*Type* ♂ (5828 Wlsm. Det. 1908) US. Nat. Mus. [PTT. (33614) Mus. Wlsm. BM.; (5830 Wlsm. Det. 1908) Mus. Meyr.]

*Hab.* MEXICO: MORELOS: Cuernavaca, VI. 1906 (*W. Schaus*). Three specimens.

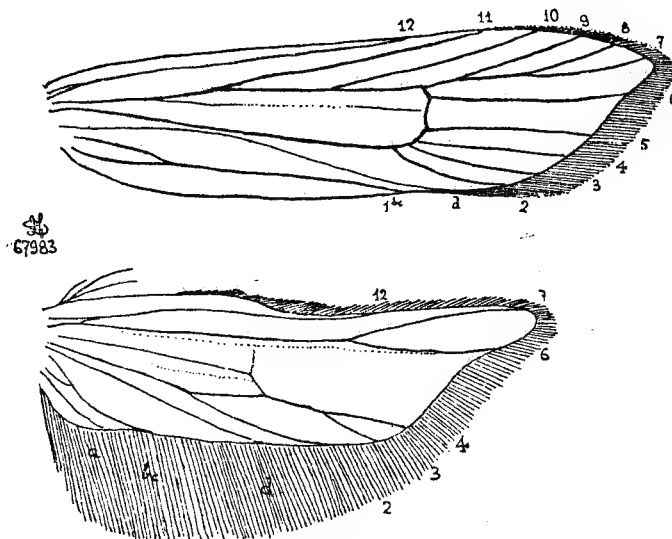


## PROCLESIS, gen. n.

(πρόκλησις=a calling forth.)

Type: *Proclesis xanthoselene* Wlsm. (Tab. III. fig. 4.)

J. H. Durrant, del.

20. *Proclesis xanthoselene* Wlsm. ♀.

*Antennae*  $\frac{3}{4}$ , without pecten. *Labial Palpi* long, recurved, smooth; the median joint only slightly thicker than the shorter terminal. *Maxillary Palpi* distinct. *Haustellum* very long, scaled at base. *Ocelli* absent. *Head* and *Thorax* smooth. *Forewings* elongate, with parallel margins, apex produced, pointed; termen oblique, scarcely sinuate, tornus obtuse: *neuration* 12 veins; 9 out of stalk of 7-8, 7 to costa; rest separate, 5-6 remote; 2 as near to 3 as 5 is to 4; 1 basally furcate. *Hindwings* trapezoidal, apex pointed, termen oblique and slightly sinuate; cilia  $\frac{4}{5}$ : *neuration* 7 veins, 5 obsolete; 3-4 stalked; 6-7 stalked; discoidal obsolete above media; 11 connecting radius to 12. *Abdomen* smooth. *Legs*: hind tibiae hairy.

Closely related to *Deoclona* Busck, with which it agrees in the peculiar *neuration* of the hindwings, but differing in the shape of the forewings, and in FW:9 arising from the stalk of 7-8, instead of being separate; the terminal joint of the palpi also is longer than in *Deoclona*.

1. *Proclesis xanthoselene*, sp. n. (Tab. III. fig. 4.)

*Antennae* pale ochreous. *Palpi* pale ochreous, tinged with brown on their inner sides; entirely suffused with brown externally. *Head* and *Thorax* ochreous. *Forewings* brownish ochreous, thickly overlaid with minute steel-blue scales, giving an oily sheen to the wing-surface, especially along the margins; this steel-blue sheen becomes intensified gradually outwards, until it forms, in some lights, a clear steel-blue patch adjacent to the apex and termen, produced outward at the apex and tornus through the cilia and enclosing a semilunate terminal patch of bright yellow-ochreous, covering a small portion of the termen and including all the terminal cilia, except at the angles; a patch of bluish scaling at the end of the cell shows a tendency to divide into two spots, and is preceded by a similar patch at about one-third the length of the cell. *Exp. al.* 18-20 mm. *Hindwings* shining, coppery yellowish; cilia almost golden yellow. *Abdomen* brownish ochreous, with a few steely scales on some segments. *Legs* ochreous.

*Type* ♀ (67982, *Bartica*) Mus. Wlsm. BM. [PT. (5788 Wlsm. Det. 1908) *Tabernilla*, US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America — PANAMA: CANAL ZONE: *Tabernilla*, VI. 1907 (*A. Busck*). South America — BRITISH GUIANA: *Bartica*, 5-8. VI. 1901 (*H. S. Parish*). Three specimens.

mm 2

## BRACHMIA Hb.

=† *BRACLUNIA* Stph.; =§ *CERATOPHORA* Hnmn.; =*EUDODACLES* Snln. (=§ *CLADODES* Hnmn.);  
=TORODORA Meyr.; =APETHISTIS Meyr.

Type 1: *Tinea dimidiella* S-D., Hb.

BRACHMIA Hb. Verz. Schm. 419 sp. 4068-9 (1826); [† *BRACLUNIA* Stph. Ill. Br. Ent. Haust. 4 205 (1834), 422 (1835)]; [GELECHIA. A.b. BRACHMIA Z. Is. 1839 197, 201-2 sp. 54-80 (1839)]; Meyr. HB. Br. Lp. 569, 605-6 no. 16 sp. 1-3 tf. 606 (1895); Wlsm. Pr. Z. Soc. Lond. 1897 62-3 no. 9 sp. 20 (1897); Stgr-Rbl. Cat. Lp. Pal. 2 157 no. 326 sp. 2609-19 (1901); Meyr. Jr. Bomb. NH. Soc. 17 151-2 (1906), 738 (1907): 20 708-25 (1911): Pr. Z. Soc. Lond. 1908 727-8 (1908): Ann. Transv. Mus. 2 13-14 Pf. 5·2 (1910); Splr. Schm. Eur. 2 350-1 no. 2 sp. 1-8 tf. 351·120-1 Tf. 88·40-1 (1910).

[nec \**BRACHMIA* Hnmn. Schm. Deutsch. Tin. 189, 230-3 no. 419 sp. 333-7 (1870), Tbl. 5, 35 no. 419 (1876) = *EPITHECTIS* Meyr. (Type: *mouffetella* L.)].

*EUDODACLES* Snln. =§ *CLADODES* Hnmn. Schm. Deutsch. Tin. 191, 330-1 no. 442 sp. 501-2 (1870), Tbl. 4, 46 no. 442 (1876); Stn. Ent. Mo. Mag. 7 172-3 (1871); Stgr-Wk. Cat. Lp. Eur. 301 no. 219 sp. 2114-7 (1871); Meyr. Tr. Ent. Soc. Lond. 1894 15 (1894). BRACHMIA (§ *CLADODES*) Rbl. Verh. ZB. Ges. Wien 53:1903 97-8 (1903); Splr. Schm. Eur. 2 351 sp. 6-8 tf. 351·121 Tf. 88·41 (1910). *EUDODACLES* Snln. Tijd. Ent. 32 204 (1889); Drnt. Bull. Soc. Ent. Fr. 1889 p. ccxxiii (1889); Wlsm. Ent. Mo. Mag. 31 41 (1895).

§ *Cladodes* Hnmn. (1870) is homonymous with *Cladodes* Solier (1849) *Coleopt.*

Type 2: *Recurvaria rufescens* Hw.

§ *CERATOPHORA* Hnmn. Schm. Deutsch. Tin. 189, 325-7 no. 440 sp. 491-5 (1870), Tbl. 5, 45 no. 440 (1876); Stn. Ent. Mo. Mag. 7 172 (1871); Stgr-Wk. Cat. Lp. Eur. 300 no. 217 sp. 2101-5 (1871); Z. Hor. Soc. Ent. Ross. 13 363-8 sp. 22-4 Pf. 5·123-4 (1877); Snln. Vlind. Nederl. Micr. 428-9, 613-8 no. 43 sp. 3-6 Pf. 8·263, 266 (1882); Tijd. Ent. 44 84-6 sp. 12-13 Pl. 6·2, 4 (1901): 46 41-3 sp. 14 Pf. 4·11-12 (1903); Pgstchr. Zool. 29 236 (1900). BRACHMIA (a. \**BRACHMIA*) Splr. Schm. Eur. 2 351 sp. 1-5 tf. 351·120 Pf. 88·40 (1910).

§ *Ceratophora* Hnmn. (1870) is homonymous with *Ceratophora* Gray (1840) *Rept.*

Spüler employs *Brachmia* Hb. in a subgeneric sense for *rufescens* Hw., referring *dimidiella* S-D. to his subgenus § *Cladodes* Hnmn., and *luculella* Hb. to *Teleia* Hnmn.; since *Brachmia* Hb. was founded on these two species such subgeneric usage is inadmissible.

Type 3: *Torodora characteris* Meyr. (Meyr. 1894).

TORODORA Meyr. Tr. Ent. Soc. Lond. 1894 16-17 sp. 5-7 (1894): Jr. Bomb. NH. Soc. 16 599-600 (1905): 17 151 (1906).

Type 4: *Apethistis metoeca* Meyr. (Meyr. 1908).

APETHISTIS Meyr. Jr. Bomb. NH. Soc. 18 459-60 (1908): 20 708 (1911).

### 1. *Brachmia virescens*, sp. n. (Tab. III. fig. 5.)

*Antennae* biciliate  $\frac{1}{2}$ ; greenish grey, faintly annulate. *Palpi* pale greenish grey, slightly sprinkled externally with fuscous; terminal joint as long as median, with a fuscous shade before its apex. *Head* and *Thorax* pale olivaceous greenish, the latter somewhat shaded with fuscous. *Forewings* narrow, somewhat widened

outwardly, termen oblique, apex scarcely depressed; pale olivaceous greenish, with fuscous cloud-like spots—one at the base of the costa, reduplicated on the base of the cell, the lower portion stretching a little beyond the upper; one a little beyond the middle of the cell, reduplicated on the upper edge of the fold, below and a little beyond it; one on the costa before the cilia, and another, smaller and more clearly defined, a little before it on the end of the cell; the wing-surface is somewhat sprinkled with fuscous scales, and a series of fuscous spots along the middle of the terminal cilia is continued around the apex, with which exception the cilia are pale greenish ochreous. *Exp. al.* 13 mm. *Hindwings* 1<sup>+</sup>, trapezoidal, not sinuate below the apex; pale rosy grey; cilia pale cinereous. *Abdomen* greyish fuscous; anal tuft greenish ochreous. *Legs* pale cinereous, the tarsi and ends of the tibiae faintly spotted.

*Type* ♂ (65640) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### NOEZA Wkr.

*Type*: *Noeza telegraphella* Wkr. (Wkr. 1866).

NOEZA Wkr. Cat. Lp. BM. 35 1839–40 (1866).

*Antennae* 1, basal joint without pecten. *Labial Palpi* long, recurved; median joint scimitar-shaped, laterally compressed, smooth at the sides, with long hairs above and below, except towards the base; terminal joint slender, pointed. *Maxillary Palpi* well-developed. *Haustellum* scaled. *Head* and *Thorax* smooth. *Forewings* with costa bulged towards the base, depressed at or beyond middle, apex obtuse, termen somewhat oblique, tornus rounded: *neuration* 11 veins; 7–8 coincident, to costa; 2–3 stalked; rest separate. *Hindwings* 1<sup>+</sup>, termen obliquely rounded, not incised below apex: *neuration* 8 veins; 6–7 closely approximate; 3–4 connate, or short-stalked; 5 cubital, about midway between 4 and 6; discoidal obsolescent between 5 and 6. *Abdomen* moderate. *Legs*: hind tibiae slightly haired above.

Allied to *Dichomeris* Hb. and *Anorthosia* Clms., but differing in general structure, as well as in the coincidence of FW: 7–8.

#### 1. *Noeza auritogata*, sp. n. (Tab. III. fig. 6.)

*Antennae*, ♂ biciliate 1; pale chestnut. *Palpi* with the base and upper two-thirds of the median joint pale chestnut, its apex and lower third bright yellow; terminal joint scarcely half the length of the median, white. *Head* chestnut above; face whitish. *Thorax* chestnut. *Forewings* with the costa bulged towards the base, depressed on the middle, apex obtusely subfalcate; termen slightly concave, slightly oblique, tornus obtuse; reddish chestnut, with a patch of reddish ochreous, slightly raised scales on either side of the fold at about one-fourth; a small dark chestnut spot at the end of the cell; an elongate transverse dark chestnut shade, separated from the termen by a shining lilac marginal line, which is widened upward to the apex, whence it is diffused and diluted inward over the wing-surface, at least as far as the upper angle of the cell; cilia rich reddish chestnut. *Exp. al.* 21 mm. *Hindwings* golden-yellow; cilia slightly tinged with chestnut at the extreme apex. *Abdomen* golden yellowish. *Legs* reddish chestnut, pale ochreous on their inner sides.

*Type* ♂ (65577) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800–1500 ft. (*G. C. Champion*). Unique.

#### 2. *Noeza oncoteria*, sp. n. (Tab. III. fig. 7.)

*Antennae* delicately annulate with black and very pale yellow. *Palpi* with the median joint thickened above and beneath; terminal joint scarcely shorter than the median, slender; the former ferruginous externally, the latter whitish ochreous. *Head* ochreous, shaded with ferruginous posteriorly. *Thorax* pale ochreous, margined in front with ferruginous. *Forewings* narrow at the base, widened outwardly, apex rounded, termen oblique; pale yellowish ochreous, suffused with ferruginous towards the termen, and in a large blotch extending from the base on either side of the fold and along the dorsum to the commencement of the tornal cilia, its outer extremity somewhat attenuate, leaving a space of the same ground-colour

between it and a dark ferruginous costal blotch a little beyond the middle; the termen is narrowly pale yellowish ochreous, with three ferruginous dots at the base of the cilia; cilia yellowish ochreous on their basal half, whitish ochreous on their outer half. *Exp. al.* 11 mm. *Hindwings* 1+, slightly sinuate below the apex; shining, pale grey; cilia shining, pale greyish cinereous, with a slender yellowish line along their base. *Abdomen* greyish; anal tuft ochreous. *Legs* pale yellowish cinereous.

*Type* ♂ (65569) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*). Unique.

### ANORTHOSIA Clms.

=CARNA Wkr. (=§ *RHOBONDA* Wkr.); =§ *SAGARITIS* Chmb.

*Type* 1: *Anorthosia punctipennella* Clms. (Clms. 1860).

ANORTHOSIA Clms. Pr. Ac. Nat. Sc. Phil. 12 161 (1860): Clms-Stn. Tin. N-Am. pp. x, 110-12 tf. 111 (1872); Chmb. Can. Ent. 6 245 (1874). § *SAGARITIS* Chmb. Can. Ent. 4 225-6 (1872): 6 245 (1874): Bull. US. GG. Surv. 4 162 (1878): Jr. Cin. Soc. NH. 2 198 tf. 202-14 (1880). ANORTHOSIA Wlsm. Tr. Ent. Soc. Lond. 1891 110-11 Pf. 7-84, 5-45 (1891); Busck Bull. US. Nat. Mus. 52 507 sp. 5675-6 (1902): Pr. US. Nat. Mus. 25 772, 917-9, 938 Pf. 32-35 (1903); Meyr. Jr. Bomb. NH. Soc. 18 150 (1907).

*Type* 2: *Rhobonda punctatella* Wkr. (Wkr. 1864).

CARNA Wkr. =§ *RHOBONDA* Wkr. Cat. Lp. BM. 29 802-3 sp. 1 (1864). CARNA Wkr. Cat. Lp. BM. 30 1038 (1864) nm.

§ *Rhobonda* Wkr. (1863) is homonymous with *Rhobonda* Wkr. (1863) Lp., *gn.alt.*

### 1. *Anorthosia punctipennella* Clms.

n. syn. = *gracilella* Chmb.

*Anorthosia punctipennella* Clms. Pr. Ac. Nat. Sc. Phil. 12 161 (1860)<sup>1</sup>: Clms-Stn. Tin. N-Am. p. x, 38 sp. 35, 110-12 tf. 111 (1872)<sup>2</sup>. *Sagaritis gracilella* Chmb. Can. Ent. 4 226 (1872)<sup>3</sup>. *Anorthosia punctipennella* Chmb. Bull. US. GG. Surv. 4 129 (1878)<sup>4</sup>. *Sagaritis gracilella* Chmb. Bull. US. GG. Surv. 4 162 (1878)<sup>5</sup>: Jr. Cin. Soc. NH. 2 tf. 202-14 (1880)<sup>6</sup>; Riley, Smith's List Lp. Bor-Am. 103 sp. 5544 (1891)<sup>7</sup>. *Anorthosia punctipennella* Riley, Smith's List Lp. Bor-Am. 103 sp. 5522 (1891)<sup>8</sup>; Busck Bull. US. Nat. Mus. 52 507 sp. 5675 (1902)<sup>9</sup>: Pr. US. Nat. Mus. 25 918, 938 Pf. 32-35 (1902)<sup>10</sup>: Pr. Ent. Soc. Wash. 5 198 (1903)<sup>11</sup>; Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6355 (1903)<sup>12</sup>. *Anorthosia gracilella* Busck Bull. US. Nat. Mus. 52 507 sp. 5676 (1902)<sup>13</sup>: Pr. US. Nat. Mus. 25 919 (1903)<sup>14</sup>; Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6356 (1903)<sup>15</sup>.

*Hab.* AMERICA, N-C. United States, E.<sup>1-15</sup>—NEW JERSEY: Essex County Park, 24. VI. (*W. D. Kearfott*)—PENNSYLVANIA<sup>(=1-2)</sup>—DISTRICT OF COLUMBIA<sup>10</sup>: Washington<sup>10</sup>, VI. 1901 (*A. Busck*)—KENTUCKY<sup>3, 13-14</sup>. Central America—MEXICO: VERA CRUZ: Cordova, I. 1908 (*F. Knab*): TABASCO: Teapa, III. (*H. H. Smith*)—PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*).

Busck<sup>(14)</sup> suggested that *gracilella* Chmb. might eventually be proved to be the

same as *punctipennella* Clms., and now agrees that there is no reason to think that these names represent two distinct species.

## 2. *Anorthosia terracotta*, sp. n. (Tab. III. fig. 8.)

*Antennae* pale clay-red. *Palpi* divergent, the median joint very long, thickly fringed above from near base to apex; terminal joint short, slender, naked; pale red. *Head* and *Thorax* pale clay-red. *Forewings* and *cilia* unicolorous clay-red. *Exp. al.* 15 mm. *Hindwings* and *cilia* reddish grey. *Abdomen* reddish grey. *Legs* pale greyish.

*Type* ♀ (65579) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*). Unique.

## 3. *Anorthosia capillata*, sp. n. (Tab. III. fig. 9.)

*Antennae*, ♂ minutely serrate and ciliate, with a notch at the end of the basal joint; ochreous, banded above with fuscous. *Palpi* long, divergent, brownish ochreous; median joint clothed above and below with long hair-like scales, giving it a flattened quadrate appearance, very hirsute towards its end; terminal joint paler, with a fuscous line along its underside, about equal in length to the median joint, very slender, and seeming to arise from the outer side of its brush-like clothing. *Head* and *Thorax* ochreous, the latter dusted with brownish. *Forewings* ochreous, streaked and clouded with brown; about the middle of the wing a broad brown streak crosses the cell obliquely outward from its upper to its lower edge, and above and beyond this the wing is more or less clouded with the same colour, slender lines of ochreous scales running through it in the direction of the veins; some fuscous scales are strewn along the fold throughout, a few also on the cell beyond the oblique brown streak, some below the costa, and others, forming a slight fuscous shade, before the apex and termen; a pale ochreous line marks the base of the light brownish cilia. *Exp. al.* 12 mm. *Hindwings* brownish grey; cilia slightly paler. *Abdomen* brownish grey, whitish ochreous beneath; anal tuft ochreous. *Legs* brownish grey.

*Type* ♂ (65625) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: VERA PAZ: Panimá, 1800 ft., 8–15. X. 1879 (*G. C. Champion*). Unique.

## DICHOMERIS Hb.

= RHINOSIA Tr.; = \**YPSOLOPHUS* (F.) Z. (†*HYPSILOPHUS* Oxf-Camb.; †*HYPSOLOPHUS* HS.; †*HYPSOLOPHA* HS.); = TRICHOTAPHE Clms. (= \**NOTHRIS* Chmb.); = VAZUGADA Wkr.; GAESA Wkr.; = BEGOE Chmb.; = EPICORTHYLIS Z.; = MALACOTRICHA Z.; = HELCYSTOGRAMMA Z. (= \**NOTHRIS* Wlsm.; *BRACHYCROSSATA* B. Wlsm.).

Type 1: *Dichomeris ligulella* Hb. (Hb. 1818).

DICHOMERIS Hb. Ztr. Smlg. Exot. Schm. 1 25, [37] sp. 72 Pf. [25] · 143–4 (1818): Verz. Schm. 405 sp. 3900 (1826); Busck Pr. Ent. Soc. Wash. 11 89–91 (1909).

Type 2: *Tinea ustulella* F. (= †*ustulella* F.) (Dp. 1838).

RHINOSIA Tr. Schm. Eur. 9 (2) 9–22 no. 141 sp. 1–11 (1833); Dp. Ann. Soc. Ent. Fr. 7 135–6 no. 10 (1838): HN. Lp. Fr. 11 14–15, 179–201 no. 10 sp. 1532–9 Pf. 292 · 6–11, 293 · 1–8 (1838).

[\* *RHINOSIA* (Tr.) Hnmn. Schm. Deutsch. Tin. 190, 327–9 no. 441 sp. 496–500 (1870), Tbl. 5, 46 no. 441 (1876); Stn. Ent. Mo. Mag. 7 172 (1871); Stgr-Wk. Cat. Lp. Eur. 300 no. 218 sp. 2106–13 (1871); Stgr-Rbl. Cat. Lp. Pal. 2 158 no. 327 sp. 2920–7 (1901) = *OROPHIA* Hb. (Type: *denisella* S.-D., Hb.).]

Type 3: *Alucita marginella* F.

\**YPSOLOPHUS* (F.) Z. Isis 1839 189-90 no. 15 sp. 1-16 [B. *YPSOLOPHUS* (F.) Z. Isis 1839 189-90 sp. 5-14] (1839); HS. SB. Schm. Eur. 5 11 no. 63 (1853). *HYPSOLOPHUS* HS. SB. Schm. Eur. 5 42 no. 63 Pf. 12·23-7 (1853). *HYPSOLOPHA* HS. SB. Schm. Eur. 5 153-5 no. 63 sp. 377-84 (1854), Syst. Lp. 54 no. 377 sp. 391-7 (1855). *YPSOLOPHUS* Stn. List Br. An. BM. 16 Lp. 88-9 no. 13 sp. 1-2 (1854): Ins. Br. Lp-Tin. 76, 145-6 no. 13 sp. 1-2 Pf. 4·10<sup>a-c</sup> (1854). *HYPSILOPHUS* (ὕψιλος=with a high crest) Oxf-Camb. Ent. Soc. Acc. List Br. Lp. 89 (1858). *YPSOLOPHUS* Hnmn. Schm. Deutsch. Tin. 337-40 no. 447 sp. 510-17 (1870), Tbl. 6, 46-7 no. 447 (1876); Stgr-Wk. Cat. Lp. Eur. 301-2 no. 225 sp. 2134-42 (1871); Snln. Vlind. Nederl. Micr. 431, 699-701, 1087 no. 57 sp. 1-2 Pf. 8·274, 9·278 (1882); Meyr. HB. Br. Lp. 569, 607-9 no. 18 sp. 1-8 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 159 no. 333 sp. 2950-9 (1901). *HYPSOLOPHUS* Splr. Schm. Eur. 2 354-5 no. 12 sp. 1-8 Pf. 88·48-9 (1910). *YPSOLOPHUS* Chmb. Bull. US. GG. Surv. 4 166-7 (1878): Jr. Cin. Soc. NH. 2 198 tf. 202·16 (1880); Wlsm. Tr. Am. Ent. Soc. 10 185-8 (1882); Riley, Smith's List Lp. Bor-Am. 103 sp. 5523-34 (1891); Busck Bull. US. Nat. Mus. 52 507-8 sp. 5678-92 (1902): Pr. US. Nat. Mus. 25 772, 920-7, 938 Pf. 32·36 (1903); Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6358-72 (1903); Berg An. Soc. Ci. Argent. 19 282-3 (1885); Wlsm. Pr. Z. Soc. Lond. 1891 525-7, 546 no. 50 sp. 91-4 (1892): 1897 86-7 no. 24 sp. 73-8 (1897): Tr. Ent. Soc. Lond. 1881 265-7 Pf. 12·35-6, 13·37 (1881): 1891 107-8 Pf. 5·43-4 (1891): 1897 41 Pf. 3·13 (1897). *HYPSOLOPHUS* Wlsm. Bull. Liverp. Muss. 3 2-3 (1900): NH. Sokotra 345-6 Pf. 21·3-4 (1903): Ent. Mo. Mag. 39 264-5 (1903). *YPSOLOPHUS* Meyr. Pr. Lin. Soc. NSW. 29 258, 429-35 no. 54 sp. 263-73 (1904): Jr. Bomb. NH. Soc. 16 601 (1905): 17 981-2 (1907): Rec. Ind. Mus. 5 223 (1910): Ann. S-Afr. Mus. 5 371 (1909): Ann. Transv. Mus. 2 18 Pf. 6·2 (1910).

It has long been obvious that the present usage of the geneonyms "*Ypsolophus* F." and "*Cerostoma* Ltr." must be corrected (*vide* Pr. Z. Soc. Lond. 1897 86; etc.), but as it was recognised that a study of most of the generic terms involved would have to be undertaken for the purposes of this work the correction has been deferred until now.

The chief difficulty has been occasioned by the different application of:—

*YPSOLOPHA* Ltr. Préc. Gen. Ins. 145 (1796) no types.

*YPSOLOPHUS* F. Sppl. Ent. Syst. 421, 505-10 sp. 1-23 (1798).

*CEROSTOMA* Ltr. Hist. Nat. Crust-Ins. 3 416 (1802). Type *vittella* L. (= *dorsatus* F., Ltr. Gn. Crust-Ins. 1 Pf. 16·6).

*Ypsolopha* and *Cerostoma* appear both to have originated in Paris, and to have been applied to the same species *Phalaena Tinea vittella* L. (= *dorsella* F., *dorsatus* F., Ltr.). Latreille [Gn. Crust-Ins. 4 233 (1809)] sunk both *Ypsolophus* F. and *Cerostoma* Ltr. as synonyms of *Alucita* F. (1781), but \**Alucita* F. is invalid, being homonymous with *Alucita* L. (1758); and moreover when Fabricius published *Ypsolophus*, founded on species removed from \**Alucita* F., he left only five of its original exponents as possible



types of the latter: these are now referred to *Adela* Ltr., and *Nemophora* Hb.—it will be convenient to cite *degeerella* L. as the type of \**Alucita* F. (nec L.).

Latreille having established the synonymy *Ypsolophus* F. = *Cerostoma* Ltr. (Type: *vittella* L.), it is satisfactory to learn from Mr. Busck, who examined the Fabrician types in the Royal Museum at Copenhagen in 1908, that "there are found in their original order only six species under the genus *Ypsolophus* and all of these belong to *Cerostoma*" [Pr. Ent. Soc. Wash. 11 89-90 (1909)]. Latreille has been followed by Hübner, Guenée, Doubleday, etc., in his use of *Ypsolophus* (*Ypsolopha*), while Zeller (1839) seems responsible for the erroneous use of *Ypsolophus* in the *Gelechiadae*. Stainton adopted Zeller's nomenclature, but revived *Cerostoma* Ltr., removing this synonym of *Ypsolophus* F. back to the *Plutellidae* (*Hyponomeutidae*), and in this diverse use of these absolute synonyms he has been followed by subsequent writers (*vide* Stgr-Rbl. Cat., Dyar's List, etc.). A return must now be made to the synonymy established by Latreille and it will help to avoid confusion if the orthographic correction be now accepted:—

*HYPSILOPHUS* F., (†Oxf-Camb. emend.) †*YPSOLOPHUS* F. (1798); = †*YPSOLOPHA* Ltr. (1796); = *CEROSTOMA* Ltr. (1802); = †*HYPSOLOPHUS* HS. Type: *vittella* L.

Type 4: *Trichotaphe setosella* Clms.

*TRICHOTAPHE* Clms. Pr. Ac. Nat-Sc. Phil. 12 166 (1860); Pr. Ent. Soc. Phil. 1 131-2 (1862); Clms-Stn. Tin. N-Am. pp. x, 121-2, 180-1 (1872); Z. Verh. ZB. Ges. Wien 23: 1873 Abh. 279-80 Pf. 4 26-7 (1873); Wlsm. Tr. Am. Ent. Soc. 10 183-5 (1882); Pr. Z. Soc. Lond. 1891 523, 546, no. 46 sp. 87 (1892); 1897 83-4 no. 20 sp. 68-9 (1897); 1907 943-4 no. 21 sp. 43-4 Pf. 51 16 (1908); Busck Pr. US. Nat. Mus. 23 232-3 Pf. 1 7 (1900); Bull. US. Nat. Mus. 52 505-7 sp. 5655-72 (1902); Pr. US. Nat. Mus. 25 772, 906-16, 937-8 Pf. 32 33 (1903); 27 761-2 (1904); Pr. Ent. Soc. Wash. 5 199, 200-1, 208 (1903); 8 92-3 (1907); Can. Ent. 38 121-2 (1906); Krft. Smith's Check List Lp. Bor-Am. 112-3 sp. 6335-52 (1903); Fyles, Can. Ent. 36 211 (1904); Meyr. Tr. Ent. Soc. Lond. 1909 23 (1909); Rec. Ind. Mus. 5 222-3 (1910); Ann. Transv. Mus. 2 17-18 Pf. 5 10, 6 1 (1910). \**NOTHRIS* (nec Hb.) Chmb. Bull. US. GG. Surv. 4 158 (1878); Jr. Cin. Soc. NH. 2 198 tf. 202 17 (1880); Wlsm. Tr. Am. Ent. Soc. 10 188 (1882); Riley, Smith's List Lp. Bor-Am. 103 sp. 5535-8 (1891).

Type 5: *Psecadia abscessella* Wkr. (= *strigiplenella* Wkr.; Wkr. 1864).

*VAZUGADA* Wkr. Cat. Lp. BM. 29 803 no. 94 sp. 1 (1864).

[*Dichomeris abscessella* Wkr. *Psecadia* ? *abscessella* Wkr. Cat. Lp. BM. 28 536-7 sp. 19 (1863) n. syn. = *Vazugada strigiplenella* Wkr. Cat. Lp. BM. 29 803 (1864) *Ega*.]

Type 6: *Gaesa decusella* Wkr. (Wkr. 1864).

*GAESA* Wkr. Cat. Lp. BM. 29 803-4 no. 95 sp. 1 (1864); Moore Lp. Ceyl. 3 518 (1887); Swinh. & Cotes Cat. Moths Ind. 715 sp. 4890 (1889).

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Type 7: *Gelechia* ? *flavicostella* Clms. (= *costolutella* Chmb. ; Chmb. 1872).

BEGOE Chmb. Can. Ent. 4 209 (1872) : 9 24 (1877).

[5655 *Dichomeris flavicostella* Clms. *Gelechia* ? *flavocostella* Clms. Pr. Ac. Nat-Sc. Phil. 12 162 (1860) n. syn. = *Begoe costolutella* Chmb. Can. Ent. 4 209 (1872)].

Although it is obvious that Chambers' precise description of *Begoe costolutella* applies absolutely in every detail to the species which we know as *Trichotaphe flavicostella* Clms., it is undeniable that Chambers himself, not only when describing *costolutella* (Can. Ent. 4 209), but subsequently, with even greater confidence (Can. Ent. 9 23-4), regarded it as a synonym of *Nothris dolabella* Z.

Type 8: *Epicorthylis inversella* Z. (Z. 1873).

EPICORTHYLIS Z. Verh. ZB. Ges. Wien 23: 1873 Abh. 248-9 Pf. 3. 13<sup>a-b</sup> (1873) : Hor. Soc. Ent. Ross. 13 332-3 Pf. 4. 105<sup>a-b</sup> (1877).

Type 9: *Gelechia* (*Malacotricha*) *bilobella* Z. (Z. 1873).

GELECHIA (MALACOTRICHIA Z.) Z. Verh. ZB. Ges. Wien 23: 1873 Abh. 279, 280-2 Pf. 4. 28<sup>a-b</sup> (1873) ; Wlsm. Tr. Am. Ent. Soc. 10 185 (1882). MALACOTRICHIA Wlsm. Pr. Z. Soc. Lond. 1897 84 no. 21 sp. 70 (1897).

Type 10: *Gelechia* (*Helcystogramma*) *ribbeella* Z.

GELECHIA (HELCYSTOGRAMMA Z.) Z. Hor. Soc. Ent. Ross. 13 369-73 Pf. 5. 126-7 (1877). HELCYSTOGRAMMA Wlsm. Pr. Z. Soc. Lond. 1891 523, 546 no. 45 sp. 86 (1892) : 1897 83 no. 19 sp. 67 (1897) ; [Meyr. Ent. Mo. Mag. 46 282 (1910). Type : *obseratella* Z.].  
= \* *NOTHRIS* (nec Hb.) Wlsm. Tr. Ent. Soc. Lond. 1881 267-8 Pf. 13. 38 (1881) ; *BRACHYGLOSSATA* (Hnmn.) sect. B. Wlsm. Tr. Ent. Soc. Lond. 1891 98-9 Pf. 4. 35 (1891).

Extreme forms such as *ligulella* Hb. (*Dichomeris* Hb.) and *flavicostella* Clms. (*Trichotaphe* Clms.) are apparently so distinct that two genera have been long maintained for them (with the employment of "*Nothris*" in cases of doubt) ; a gradual series of intermediate forms, however, occurs which renders it impossible to draw the dividing line between supposed genera which were only separated by the vestiture of the palpi. The familiar name *Trichotaphe*, having served a useful purpose, must now be relegated to synonymy, and it may be emphasised that *Nothris* Hb., auct. (Type: *verbascella* Hb., FW: 2-3 separate) is at once separable from *Dichomeris* Hb. (*Ypsolophus*, auct., FW: 2-3 stalked) by the neuration, while in this it agrees with *Gelechia* Hb. (FW: 2-3 separate)—forms with the clothing of the palpi intermediate between *Gelechia* and *Nothris* (e. g. *Oeseis* Chmb.) occur in America and it is doubtful if on this character alone these genera can be separated.

### 1. *Dichomeris sciastes*, sp. n. (Tab. III. fig. 10.)

*Antennae* annulate with fuscous and pale cinereous. *Palpi* with triangular projecting tuft on the median joint; fawn-brown, shaded with fuscous externally. *Head* fawn-brown, a greyish shade along the middle. *Thorax* greyish fuscous, the tegulae paler. *Forewings* fawn-brown; a small elongate fuscous shade along the base of the costa is followed by a diffused triangular shade of the same colour on the

middle of the costa; a less intense shade, consisting of a profuse sprinkling of fuscous scales, extends from the base of the dorsum to the end of the fold, crossing the middle of the fold almost to the upper edge of the cell, beyond this again the wing is somewhat sprinkled with fuscous to the apex and termen; the usual plical and discal spots are scarcely distinguishable, but the first discal appears to be a little beyond and above the second plical; cilia pale fawn-brown, with a line of fuscous dusting before their middle. *Exp. al.* 10 mm. *Hindwings* bluish grey; cilia grey. *Abdomen* and *Legs* dull grey, the tarsi faintly pale-spotted.

*Type* ♂ (65584) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

## 2. *Dichomeris dignella*, sp. n.

*Antennae* pale ochreous, distinctly annulate with blackish. *Palpi* pale ochreous, the outer side of the median joint dark brown on two-thirds of its area, leaving the edge of the spreading tuft above and beneath ochreous. *Head* and *Thorax* pale ochreous, both stained along the middle above with greyish fuscous. *Forewings* pale ochreous, sprinkled and spotted with greyish fuscous, of which there is also a distinct streak along the base of the costa; the spots are placed thus—one on the upper edge of the fold at one-fifth, another on the cell at two-fifths, slightly preceded by a third beneath it, one at the end of the cell, and another on the costa at the commencement of the cilia; the sprinkling is scantily distributed, but somewhat thickened along the middle of the costa, in a transverse band along the middle, along the dorsum as far as the band, and again along the termen; cilia pale ochreous slightly dulled with fuscous. *Exp. al.* 11 mm. *Hindwings* pale bluish grey; cilia pale brownish grey. *Abdomen* brownish grey. *Legs* pale brownish grey; the hind tarsi banded with fuscous.

*Type* ♀ (65585) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65586, 65588) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Four specimens.

Very similar in appearance to *piperata* Wlsm. (*Pr. Z. Soc. Lond.* 1891 526: 1897 86), but slightly larger, and differing in the more bluntly rounded apex of the forewings, and more profuse fuscous sprinkling which leaves no markedly paler space before the termen as in that West Indian species.

## 3. *Dichomeris lypetica*, sp. n.

*Antennae* brownish fuscous. *Palpi* brownish fuscous, the triangular projecting tuft on the median joint slightly sprinkled with pale cinereous; terminal joint pale cinereous above. *Head* and *Thorax* brownish fuscous. *Forewings* narrow at the base, somewhat widened outward, apex slightly depressed, termen very oblique; brownish fuscous, very minutely speckled with pale cinereous; the usual group of spots scarcely distinguishable in a slightly darker shade of brownish fuscous, the first discal spot a little preceding the plical; some obscure shading faintly indicates an anteterminal band, bowed outward at its middle, and a terminal line preceding the pale cinereous cilia which are much mixed with fuscous. *Exp. al.* 12 mm. *Hindwings* and cilia pale cinereous. *Abdomen* and *Legs* brownish fuscous; the latter pale cinereous on their inner sides, with faint pale tarsal spots.

*Type* ♂ (65592) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65593-4) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Four specimens.

4. *Dichomeris ligulella*, Hb.

=†*ligula* Hb.; =*pometella* Harris<sup>28</sup>; =*contubernalellus* Fitch (†*contubernatellus* Wkr.<sup>28</sup>); =*malifoliellus* Fitch<sup>33</sup>; =*pauciguttellus* Clms.<sup>28</sup>; =*flaviguttellus* Clms.<sup>28</sup>; =*reedella* Chmb. (†*runderella* Chmb.)<sup>28</sup>; =*quercipomonella* Chmb.<sup>28</sup> (†*quercipominella* Chmb.).

*Dichomeris ligulella* Hb. Ztr. Exot. Schm. 1 25, [37] sp. 72 Pf. [25] 143-4 (1818)<sup>1</sup>. *Dichomeris ligula* Hb. Verz. Schm. 405 sp. 3900 (1826)<sup>2</sup>. *Rhinosa pometella* Harris Camb. Chron. 19. VII. 1853<sup>3</sup>: Tr. N-Y. State Agr. Soc. 13 190-2 (1854)<sup>4</sup>. *Chaetochilus pometellus* Fitch Jr. N-Y. State Agr. Soc. 4 36 (1853)<sup>5</sup>: Tr. N-Y. State Agr. Soc. 13 178-87 (1854)<sup>6</sup>: Rp. Ins. N-Y. 2 221-30 tff. Pf. 4.4 (1856)<sup>7</sup>. *Chaetochilus contubernalellus* Fitch Jr. N-Y. State Agr. Soc. 4 36 (1854)<sup>8</sup>: Tr. N-Y. Ent. Soc. 13 178 (1854)<sup>9</sup>: Rp. Ins. N-Y. 2 231-3 (1856)<sup>10</sup>. *Chaetochilus malifoliellus* Fitch Tr. N-Y. State Agr. Soc. 13 231 (1854)<sup>11</sup>: Rp. Ins. N-Y. 2 231-2 (1856)<sup>12</sup>. *Ypsolophus pauciguttellus* Clms. Pr. Ent. Soc. Phil. 2 123 (1863)<sup>13</sup>: Clms-Stn. Tin. N-Am. pp. x, 228-9 (1872)<sup>14</sup>; Z. Verh. Z-B. Ges. Wien 23:1873 283-5 (1873)<sup>15</sup>. *Ypsolophus flavivittellus* Clms. Pr. Ent. Soc. Phil. 2 429 (1864)<sup>16</sup>: Clms-Stn. Tin. N-Am. pp. x, 254 (1872)<sup>17</sup>. *Chaetochilus? contubernatellus* Wkr. Cat. Lp. BM. 30 1018 (1864)<sup>18</sup>. *Ypsolophus? ligulellus* Wkr. Cat. Lp. BM. 30 1028 (1864)<sup>19</sup>. *Ypsolophus reedella* Chmb. Can. Ent. 4 222 (1872)<sup>20</sup>. *Ypsolophus ruderella* Chmb. Bull. US. GG. Surv. 4 167 (1878)<sup>21</sup>. *Ypsolophus quercipominella* Chmb. Can. Ent. 4 222-3 (1872)<sup>22</sup>. *Ypsolophus quercipomonella* Chmb. Bull. US. GG. Surv. 4 167 (1878)<sup>23</sup>. *Ypsolophus pometellus* Chmb. Bull. US. GG. Surv. 4 166 (1878)<sup>24</sup>; Wlsm. Tr. Am. Ent. Soc. 10 186-8 (1882)<sup>25</sup>; Slngrld. Cornell Univ. Agr. Exp-Stn. Ent. Div. Bull. 187 81-101 tff. 23-30 (1901)<sup>26</sup>. *Ypsolophus ligulellus* Busck Bull. US. Nat. Mus. 52 507 sp. 5678 (1902)<sup>27</sup>: Pr. US. Nat. Mus. 25 920 921-2, 938 Pf. 32 36 (1903)<sup>28</sup>: Pr. Ent. Soc. Wash. 5 213, 218 (1903)<sup>29</sup>. *Dichomeris ligulella* Busck Pr. Ent. Soc. Wash. 11 89, 91 (1909)<sup>30</sup>. *Ypsolophus malifoliellus* Busck Bull. US. Nat. Mus. 52 508 sp. 5687 (1902)<sup>31</sup>: Pr. US. Nat. Mus. 25 925-6 (1903)<sup>32</sup>: 11 91 (1909)<sup>33</sup>.

*Hab.* AMERICA, N-C-S-I. United States<sup>1-33</sup>—ATLANTIC STATES<sup>27</sup>.—NEW YORK<sup>26, 28</sup>—PENNSYLVANIA<sup>28</sup>—NEW JERSEY<sup>26, 28</sup>—OHIO<sup>26</sup>—WISCONSIN: 1883 (*H. K. Morrison*)—DISTRICT OF COLOMBIA<sup>28</sup>—MARYLAND<sup>28</sup>—VIRGINIA<sup>16-17, 26</sup>—WEST VIRGINIA<sup>28</sup>—KENTUCKY<sup>22, 26</sup>—NORTH CAROLINA: 1883 (*H. K. Morrison*)—GEORGIA<sup>26, 28</sup>—MISSISSIPPI<sup>26</sup>—MISSOURI<sup>26, 28</sup>—KANSAS<sup>28</sup>—TEXAS<sup>26</sup>: S.W. 1883 (*H. K. Morrison*): BOSQUE: 16. V. (*G. W. Belfrage*)—LOUISIANA: 1884 (*H. K. Morrison*)—NEW MEXICO<sup>28</sup>. ⊕ *Pyrus malus* (leaves and apples)<sup>26</sup>; *Quercus spp.* (leaves and oak-apples)<sup>26</sup> VI-VII<sup>26</sup>, ⊙ VI-VII, *hib.*<sup>26</sup>. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX (*H. H. Smith*): TABASCO: Teapa, III (*H. H. Smith*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 8000 ft., 6-8. VI. 1882 (*G. C. Champion*). South America—COLOMBIA: CUNDINAMARCA: Cuequeta, IV. 1871 (*Baron von Nolcken*)—BRAZIL: RIO DE JANEIRO: Petropolis, 1881 (*H. Doer*). West Indies—JAMAICA: ST. ANDREW: Constant Springs, 18. XII. 1904 (*Wlsm.*).

[We have been unable to check the references<sup>3-6, 8-9, 11</sup>; "*Rhinocera pometella*"<sup>28</sup> is probably only a clerical error.]

Both varieties (*ligulella* Hb., and *pometella* Harris) occur in Mexico, *pometella* extending to South America and the West Indies.

### 5. *Dichomeris substratella*, sp. n.

*Antennae* pale ochreous, barred above with blackish; basal joint ochreous. *Palpi* with pale ochreous triangular tuft; the slender terminal joint fuscous. *Head* brownish ochreous; face pale ochreous. *Thorax* greyish fuscous along the middle, the front and tegulae ochreous, with some steely iridescence. *Forewings* ochreous, with a reddish brown suffusion along the dorsum extending to the end of the fold, with some sprinkling of the same beyond as well as along the costa, the basal half of which shows a shining steel bluish streak, fading outward; in the fold are two elongate blackish spots, and between them, but nearer to the outer one, a patch of blackish scales rests on its upper edge and is followed by a small black spot at the end of the cell; there is also a geminate black spot on the termen; cilia brownish ochreous; thus the general appearance of the wing is reddish, or brownish ochreous, the paler ground-colour exhibited only in a subcostal streak from the base which becomes diffused and almost lost outwardly toward the apex. *Exp. al.* 15-16 mm. *Hindwings* and cilia brownish grey, somewhat transparent, but not noticeably iridescent towards the base. *Abdomen* griseous above, ochreous beneath; anal tuft ochreous. *Legs* pale ochreous.

*Type* ♂ (65582 *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (5798-802 Wlsm. Det. 1908; 6268 Drnt. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Cordova, V. 1908 (*F. Knab*): TABASCO: Teapa, III. (*H. H. Smith*). South America—FRENCH GUIANA: Cayenne, XII. 1903 (*W. Schaus*). Eleven specimens.

This species differs from *stratella* Wlsm. in its paler colouring, in the absence of the clear definition of the darker dorsal half of the wing, in its pale cilia, and, noticeably, in the steel-blue streak along the base of the costa; the hindwings and legs are also paler.

### 6. *Dichomeris percnopholis*, sp. n. (Tab. III. fig. 11.)

*Antennae* olivaceous ochreous. *Palpi* with the broadly triangular tuft on median joint dark chocolate-brown, except at the stone-grey fringe along its upper edge; terminal joint slender, whitish ochreous, its apex slightly shaded with umber-brown. *Head* and *Thorax* stone-grey, the latter with a slight ochreous tinge. *Forewings* stone-grey, with a slight olivaceous tinge, especially towards the termen; the base is tinged with ochreous and the costa narrowly ochreous throughout, including the costal cilia with which the terminal and apical cilia correspond, a faint paler line running through their middle; on the dorsum before the tornus is a quadrate dark chocolate-brown patch crossing the outer extremity of the fold, and a marginal series of 7 or 8 small spots of the same colour extends along the termen and around the apex; there is some indication of two plical and three discal dots, the first discal slightly preceding the second plical, the third discal scarcely preceding the second discal which is at the upper angle of the cell above it. *Exp. al.* 22 mm. *Hindwings* broader than the forewings; tawny brownish grey; cilia somewhat paler, with a slender subochreous line along their base. *Abdomen* and *Legs* dark brownish grey; tibiae pale cinereous above and on their inner sides.

*Type* ♂ (65628) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Zapote, 2000 ft., V. 1879 (*G. C. Champion*). Unique.

A distinct species, perhaps most nearly allied to 5683 *citrifoliella* Chmb.

### 7. *Dichomeris caryaefoliella* Chmb.

*Ypsolophus caryaefoliella* Chmb. Can. Ent. 4 224 (1872)<sup>1</sup>: Bull. US. GG. Surv. 4 166 (1878)<sup>2</sup>.  
*Ypsolophus caryaefoliellus* Riley, Smith's List Lp. Bor-Am. 103 sp. 5524 (1891)<sup>3</sup>; Busck

Bull. US. Nat. Mus. 52 508 sp. 5684 (1902)<sup>4</sup>: Pr. US. Nat. Mus. 25 920, 923 (1903)<sup>5</sup>; Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6364 (1903)<sup>6</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-6</sup>—KENTUCKY<sup>1, 4-5</sup>: ⊕ *Carya alba*, VI, ex. VI<sup>1</sup>—MISSOURI<sup>4-5</sup>—TEXAS<sup>4-5</sup>. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*).

### 8. *Dichomeris hexasticta*, sp. n.

*Antennae* biciliate  $1\frac{1}{2}$ , toward the base serrate, but not ciliate beyond the middle; cinereous. *Palpi* broadly triangular on the median joint, dark brown externally, hoary greyish on its innerside and along its outer margin; the slender terminal joint pale cinereous. *Head* and upper portion of *Thorax* hoary greyish; the tegulae and sides of the thorax pale ochreous. *Forewings* pale straw-ochreous, a black spot at the extreme base is produced outward in a thin line along the costa, nearly to the middle, and is narrowly margined beneath with whitish ochreous; before the middle of the wing is a group of four conspicuous black spots, three on the cell arranged as an equilateral triangle with the apex outward, the fourth on the fold below and a little beyond the lower of the three; beyond these at the end of the cell are two similar spots, the upper a little beyond the lower; a series of from six to eight much smaller black spots occurs along the termen and around the apex; cilia very pale ochreous. *Exp. al.* 18 mm. *Hindwings* greyish cinereous; cilia very pale cinereous, with a slight shade-line running along their base. *Abdomen* brownish cinereous. *Legs* brownish cinereous; the hairy upper half of the tibiae paler.

*Type* ♂ (65611) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65612) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

### 9. *Dichomeris leucostena*, sp. n. (Tab. III. fig. 12.)

*Antennae* slightly serrate and very shortly ciliate; fuscous above, whitish beneath, with faint whitish annulations towards the apex. *Palpi* whitish, the median joint with a broad brush beneath, shaded with brownish fuscous externally, except along its terminal margin. *Head* white, sprinkled with fuscous scales; face shining bronzy. *Thorax* brownish fuscous, anteriorly whitish; tegulae white. *Forewings* brownish fuscous, darker on the basal third than beyond it, with a broad darkened oblique shade parallel with the termen at three-fourths, and a small dark spot about the upper angle of the cell; along the costa is a broad white band including at its origin the whole base of the wing, except a short dark streak along the extreme costa, and gradually attenuate to its apex at the commencement of the costal cilia; cilia pale greyish. *Exp. al.* 18 mm. *Hindwings* and cilia pale greyish. *Abdomen* greyish fuscous; anal tuft whitish ochreous. *Legs* whitish, with a dark spot externally at the first joint of the tibiae.

*Type* ♂ (65613) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 10. *Dichomeris melanota*, sp. n. (Tab. III. fig. 13.)

*Antennae* black, fading slightly to brownish black outwardly. *Palpi* black, each of the projecting scales on the strong triangular tuft tipped with hoary cinereous; terminal joint ochreous, with a strong black shade along the underside, tapering toward the apex, but again widened to embrace the sides somewhat before and up to the apex. *Head* and *Thorax* black. *Forewings* slightly lustrous, bluish black, with inconspicuous darker dull black markings; an outwardly oblique streak, arising on the fold at one-third of the wing-length, but not quite reaching the costa before the middle; some minute transverse striae along the dorsum, and a triangulate transverse streak, arising from the costa at three-fourths, pointing outward toward the rather suddenly depressed and angulate apex, then sharply bent inward making two adjacent points directed toward the upper angle of the cell, and again descending with a slight



outward curve to the tornus, before which there is a minute ochreous marginal spot; cilia blackish, slightly touched with ochreous at their base and on their outer ends. *Exp. al.* 18 mm. *Hindwings* dark brownish fuscous, a pale ochreous line along the base of the more greyish fuscous cilia. *Abdomen* dark brownish fuscous; anal tuft inclining to ochreous. *Legs* whitish ochreous, stained with dark brownish fuscous along the outer sides of the hind tibiae and first joints of hind tarsi.

*Type* ♀ (5980 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: VERA CRUZ: Cordova, IV. 1908 (*F. Knab*). Unique.

A very distinct dark species, somewhat resembling *Strobisia* in wing-form.

### 11. *Dichomeris arotrosema*, sp. n.

*Antennae* slightly serrate; black above, pale cinereous beneath, annulate with pale cinereous on and near the basal joint. *Palpi* with the median joint clothed with a large fan-like expanding tuft which recedes equally above and below from its apex, greyish fuscous, profusely sprinkled with whitish cinereous; terminal joint slender, subochreous, tipped and shaded beneath with fuscous. *Head* greyish fuscous, profusely sprinkled with greyish cinereous. *Thorax* dark chocolate-brown, the tegulae tawny. *Forewings* dark chocolate-brown along the dorsum to two-fifths, this colour being diffused upward and outward obliquely, nearly reaching the costa beyond the middle, blending on its outer side into dark tawny fuscous, which embraces the whole outer half of the wing and cilia, but is slightly sprinkled with pale cinereous scales leaving a large pale tawny patch at the base of the costa, attenuate outward to a little beyond the middle, a small pale tawny dorsal spot lying before the tornus. *Exp. al.* 17–22 mm. *Hindwings* 1, trapezoidal; dark brown; cilia brownish grey, somewhat darkened around the apex. *Abdomen* dark tawny. *Legs* tawny fuscous, sprinkled and smeared with pale cinereous.

*Type* ♂ (65614 *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (5803 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: *Atoyac*, V. (*H. H. Smith*), (*Schumann*); Cordova, V. 1908 (*F. Knab*). Three specimens.

### 12. *Dichomeris nessica*, sp. n.

*Antennae* pale cinereous, dotted with blackish above. *Palpi*: median joint with a wide, somewhat quadrangular brush of scales above and beneath, profusely dusted with pale cinereous; terminal joint pale cinereous. *Head* fuscous, paler at the sides. *Thorax* fuscous in the middle; tegulae brown, mixed with cinereous. *Forewings* somewhat narrow, costa flattened in the middle, apex depressed, falcate, termen sinuate; commencing at the base is a large greyish cinereous patch, which, after following the fold nearly to its middle, is attenuate upward and outward to the commencement of the costal cilia; the remainder of the wing is of varying shades of dark chestnut-brown, containing a small black spot on the fold, and a larger circular spot of the same colour at the end of the cell; a faint shade, rising from before the tornus, runs nearly parallel with the termen and vanishes half-way between the discal spot and the apex; cilia brownish ochreous, with a brown line along their base, the costal cilia inclining to ochreous; underside greyish fuscous, the costa pale brownish ochreous. *Exp. al.* 21 mm. *Hindwings* greyish fuscous; cilia slightly paler; underside pale brownish ochreous along the costa, the remainder greyish fuscous. *Abdomen* greyish brown, with pale cinereous cross-bands above; anal tuft inclining to ochreous. *Legs* brownish ochraceous, the tarsi much shaded with greyish brown.

*Type* ♂ (67727) Mus. Wlsm. BM.

*Hab.* PANAMA: PANAMA: La Chorrera, V. 1898 (*C. H. Dolby-Tyler*). Two specimens.

Very similar to *arotrosema*, but with falcate apex and more faded in general appearance.

### 13. *Dichomeris mexicana*, sp. n.

*Antennae* annulate with fuscous and pale ochreous; more than three-fourths as long as the forewings. *Palpi* with long triangular brush, projecting a little above, and far forward beneath the median joint, this is fuscous nearly to its outer edge, where it becomes pale cinereous, the fuscous portion being also speckled with pale cinereous; terminal joint longer than the median, very slender, recurved, pale ochreous tipped with fuscous. *Head* rather roughly scaled; fawn-grey. *Thorax* fawn-grey, the tegulae inclining to ochreous. *Forewings* elongate, the costa straight, apex slightly depressed, obtuse, termen oblique, rounded; fawn-grey, speckled with fawn-ochreous, the basal fourth dull ochreous, with fuscous sprinkling; a small black dot in the fold at one-fifth, followed by a broad triangular blackish patch arising from the dorsum at the flexus and tending outward across the fold nearly to the costa, but ill-defined below the fold, while more clearly defined in and above it; the costa is narrowly spotted with fuscous, alternating with pale fawn-ochreous, of which there is a slight spot on the outer fourth, followed by a series of ill-defined smaller spots of the same around the apex, termen, and tornus, the terminal area preceding them being somewhat clouded with fuscous; the outer half of the cell is also clouded, a small angular whitish spot lying at its outer end; cilia pale fawn-ochreous, thickly sprinkled with lines of fuscous scales. *Exp. al.* 14–16 mm. *Hindwings* trapezoidal, not emarginate; brownish grey, with a slender subochreous line running along the base of the cloudy brownish grey cilia. *Abdomen* fawn-grey. *Legs* whitish ochreous, shaded externally with fuscous.

*Type* ♂ (35613) Mus. Wlsm. **BM.** [*PTT.* (35616, 35618, 35620) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Nine specimens.

### 14. *Dichomeris renascens*, sp. n. (Tab. III. fig. 14.)

*Antennae* pubescent; cinereous, faintly annulate with brownish. *Palpi* with the median joint scimitar-shaped, brush-like above on its outer half; dark fawn-brown, pale cinereous on its inner side along the upper half, and on its outer side along its apical margin; terminal joint slender, erect, slightly recurved, its upper half pale cinereous, its lower half dark fawn-brown. *Head* and *Thorax* brownish cinereous. *Forewings* brownish cinereous, with a somewhat broken pale ochreous line along the costa, traceable, although somewhat diluted, around the apex and termen at the base of the pale cinereous cilia; a small fuscous spot lies below the costa at about one-sixth from the base, below and beyond it a large chocolate-brown patch covers the whole middle portion of the fold and extends upward and outward less widely to the upper edge of the cell; an elongate brown spot marks the cross vein at the end of the cell, and a pale cinereous line, slightly curved inward, cuts off the apical sixth of the wing from costa to dorsum, a broken line of the darker shade of the ground-colour running along the termen, and a pale spot lying at the lower edge of the brown patch below the fold. *Exp. al.* 15 mm. *Hindwings* umber-brown; cilia somewhat paler. *Abdomen* umber-brown; anal tuft and underside whitish ochreous. *Legs* whitish ochreous, shaded externally with dark brownish cinereous.

*Type* ♂ (65553) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.**

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

### 15. *Dichomeris ardesiella*, sp. n.

*Antennae* greyish fuscous. *Palpi* dark greyish fuscous; the median joint thickened above and beneath, expanding toward the apex, where the scales are margined by a narrow white line; the base of the terminal joint also whitish, but gradually overspread by the darker colour. *Head* greyish fuscous, paler at the sides. *Thorax* greyish fuscous. *Forewings* dark greyish fuscous, with a slight purplish gloss; the extreme costa is very narrowly edged with ochreous as far as the commencement of the costal cilia, where a slight, very pale ochreous shade is projected downward on the wing-surface, apparently indicating the line of a vanished fascia; a minute blackish spot, at the extreme base of the costa, is followed by another, sometimes obsolete, on the cell at one-fifth, and beyond this, in the same line, is another discal spot at two-fifths, followed by another at the end of the cell, from which descends a short, inwardly bowed line of similarly dark scales; there is another dark spot in the fold, below the median

discal spot, preceded and followed by a few ochreous scales, of which a very few are also found connected with the two outer discal spots; a few blackish scales occur along the termen before the faintly sub-ochreous base of the smoky grey cilia. *Exp. al.* 15 mm. *Hindwings* smoky dark leaden grey; cilia scarcely paler, smoky greyish. *Abdomen* dark greyish fuscous. *Legs* greyish ochreous, outer sides of hind tibiae, spurs, and tarsi, shaded with greyish fuscous.

*Type* ♂ (5765); *PTT.* (5767, 5769, 5771, 5773, 5775, 5777, 5779, 5781, 5783 Wlsm. Det. 1908) US. Nat. Mus. [*PTT.* (33620-9) Mus. Wlsm. BM.]

*Hab.* MEXICO: VERA CRUZ: Cordova, I-II, V. 1908 (*F. Knab*). Twenty specimens.

### 16. *Dichomeris jugata*, sp. n.

*Antennae* fuscous, faintly spotted with pale cinereous. *Palpi* with the median joint smoothly and densely clothed, somewhat widened, evenly recurved, terminal joint a little shorter than median, tapering, acute; fuscous, the terminal joint with a few pale ochreous scales. *Head* and *Thorax* dull purplish fuscous; the tegulae with an oblique whitish streak across them. *Forewings* dark purplish fuscous, with an irregular upright dull ochreous patch on the middle of the dorsum, reaching to a little above the radius, narrowly outlined with dark fuscous accompanied by a few whitish scales; beyond this is a small dark fuscous spot at the end of the cell, narrowly bounded above by a few whitish scales, obscurely extended toward the dorsum; a small triangular whitish spot lies on the costa before the apical depression, an outward line of thinly scattered scales extending from it to the dorsum, a series of minute whitish spots preceding the fuscous cilia. *Exp. al.* 13-15 mm. *Hindwings* brownish fuscous; cilia with a slight greyish shade. *Abdomen* greyish fuscous, tinged with ochreous at the sides and posteriorly. *Legs* greyish fuscous externally, pale on their inner sides, with three whitish ochreous tarsal annulations.

*Type* ♂ (65554, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65548, 65555) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: Cerro Zunil, 4000-5000 ft., 1881 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881 (*G. C. Champion*). Five specimens.

The whitish markings on the tegulae render this otherwise obscure species somewhat conspicuous.

### 17. *Dichomeris melissia*, sp. n.

*Antennae* fuscous, becoming serrate, and tinged with pale ochreous beyond the middle. *Palpi* ochreous, of which there is a slightly darker shade toward the apex of the somewhat thickened median joint. *Head* greyish fuscous, tinged with ochreous at the sides; face dull ochreous. *Thorax* fuscous, the tegulae streaked with brownish ochreous. *Forewings* bronzy fuscous, a rust-brown hive-shaped upright patch, a little before the middle of the dorsum, reaches to the upper edge of the cell and is rounded and slightly inverted at its apex; the brown colour fades upwardly about its apex and around its margins to pale ochreous, and there is a small brownish ochreous spot beyond it at the end of the cell; a dull whitish ochreous spot lies at the commencement of the costal cilia, and a few pale dots along the termen; cilia greyish fuscous, with a blackish line along their base. *Exp. al.* 11-12.5 mm. *Hindwings* and cilia pale greyish fuscous. *Abdomen* fuscous; anal tuft brownish ochreous. *Legs* greyish fuscous, with whitish ochreous bands around the tibiae and on the tarsi which are ochreous on their inner sides.

*Type* ♂ (5763 Wlsm. Det. 1908) US. Nat. Mus. [*PT.* (33630) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Two specimens.

Resembling *jugata* Wlsm., but the dorsal patch is of a much brighter colour, and the streaks on the tegulae are of a darker, more ochreous colour; the pale palpi also at once distinguish it.

18. **Dichomeris dolbyi**, sp. n. (Tab. III. fig. 22.)

*Antennae* dark brownish. *Palpi* long, recurved, the median joint scarcely roughened beneath with scales; brownish fuscous, with slender pale lines along the terminal joint above and beneath. *Head* yellowish white, the scales behind it stretching over the anterior part of the *Thorax* which is dark brown. *Forewings* dark brown, with an oblique yellowish white band commencing on the costa at one-fifth from the base and attenuate outward and downward to a little beyond the fold; a costal spot of the same colour, with a few whitish scales about the tornus; cilia dark brown at the apex, yellowish white along the termen, and brownish grey at the tornus. *Exp. al.* 14 mm. *Hindwings* greyish fuscous; cilia grey. *Abdomen* greyish fuscous. *Legs*: anterior pair greyish fuscous, the tibiae broadly banded with yellowish white; posterior legs (missing).

*Type* ♀ (67726) Mus. Wlsm. BM.

*Hab.* PANAMA: PANAMA: La Chorrera, V. 1898 (C. H. Dolby-Tyler). Unique.

Resembling *Telphusa niveisignella* Z. (ante p. 58), but, apart from differences in neuration, at once distinguished by the white head and thorax.

19. **Dichomeris ochropyga**, sp. n.

*Antennae* tawny greyish brown above, pale cinereous beneath. *Palpi* tawny reddish brown, the apical margin of the scimitar-shaped median joint narrowly pale cinereous. *Head* and *Thorax* tawny reddish brown. *Forewings* tawny reddish brown, the costa narrowly ochreous from the base to the apex; a slight oblique chestnut shade rests on the fold at one-third of its length pointing inward, and is succeeded by a dark brown spot in the fold, above and scarcely before which is a similar dark brown discal spot succeeded by another at the end of the cell; about seven minute brownish shade-spots lie around the apex and termen; cilia with a slight ochreous tinge, pale cinereous at their outer extremities. *Exp. al.* 15 mm. *Hindwings* dark umber-brown; cilia brownish cinereous. *Abdomen* umber-brown above, whitish ochreous beneath; anal tuft light ochreous. *Legs* brownish cinereous.

*Type* ♂ (65551 *Teapa*) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (65552) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (H. H. Smith): TABASCO: Teapa, III. (H. H. Smith). Two specimens.

20. **Dichomeris abortiva**, sp. n. (Tab. III. fig. 21.)

*Antennae* brownish fuscous, with very faint annulations. *Palpi* brownish fuscous, the median joint smooth, sprinkled with ochreous. *Head* and *Thorax* brownish fuscous. *Forewings* brownish fuscous, faintly speckled with pale ochreous and with an outwardly angulate, narrow, pale ochreous line from the commencement of the costal to the beginning of the dorsal cilia; this is followed by a series of pale ochreous marginal spots around the apex and termen, each preceded by a short dark shade; on the cell is an obscure whitish scale-spot, a little before the middle of the wing, followed by a pair of blackish spots surrounded by some whitish scales at the end of the cell, these are in the same line, and not one above the other; in the middle of the fold is another whitish spot, followed by a short streak of blackish scales; cilia brownish fuscous, a very slender paler line running through them. *Exp. al.* 14.5 mm. *Hindwings* greyish fuscous; cilia rather paler, especially at their base. *Abdomen* dark greyish fuscous. *Legs* greyish fuscous, with pale tarsal annulations.

*Type* ♂ (65570) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: Las Mercedes, 3000 ft., 1881 (G. C. Champion). Unique.

The specimen described is not fully developed on the left side, where the markings are less easily traceable.

### 21. *Dichomeris carinella*, sp. n. (Tab. III. fig. 20.)

*Antennae* slightly serrate; pale fawn greyish. *Palpi* recurved, the median joint laterally compressed, brush-like above towards its apex, fawn-grey on its lower portion, very pale ochreous on its upper third and along its apical margin; terminal joint slender, very pale ochreous, slightly tipped with fawn-grey. *Head* and *Thorax* pale fawn-ochreous, dusted with fawn-brown. *Forewings* very pale fawn-ochreous, profusely dusted with fawn-brown throughout, slightly paler towards the apex; with an ill-defined outwardly angulate band from the commencement of the costal cilia to the commencement of the dorsal cilia, the costa before it being somewhat more darkly shaded than the remainder of the wing, thus corresponding in colour to four slightly indicated shade-spots—one on the upper edge of the fold at about one-seventh of the wing-length, one on the middle of the cell, and one at its outer extremity, with another on the fold slightly beyond the middle one; about six dark marginal dots lie around the apex and termen before the pale fawn-ochreous cilia, of which the outer half is darker than the basal. *Exp. al.* 18 mm. *Hindwings* broader than the forewings; tawny brownish grey; cilia shining, pale cinereous, with a subochreous line along their base. *Abdomen* and *Legs* brownish cinereous, the tarsi banded with a darker shade.

*Type* ♂ (65568) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*). Unique.

### 22. *Dichomeris evitata*, sp. n. (Tab. III. fig. 15.)

*Antennae* brown. *Palpi* with the median joint somewhat scimitar-shaped, with a brush of scales above and toward the tip beneath; greyish brown, the outer extremity of the scale-tuft narrowly paler grey; terminal joint slender, recurved, as long as the median, pale brownish ochreous, with a broken dark line along its underside. *Head* and *Thorax* greyish brown. *Forewings* dark greyish brown, with broad irregular broken lines of dark brown following the veins along the upper and lower edge of the cell, as well as above and beyond it; these form a spot-like shade a little before the termen below the apex, and another on the costa before the apex, the latter having a small pale costal spot at either extremity; cilia dark greyish brown, with a few paler sub-ochreous scales along their middle below the apex. *Exp. al.* 15 mm. *Hindwings* somewhat trapezoidal, not sinuate below the apex; umber-brown; cilia greyish brown, a slender pale line running along their base. *Abdomen* dark brown above, pale cinereous beneath; anal tuft inclining to ochreous. *Legs* (missing).

*Type* ♂ (65550) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*). Unique.

### 23. *Dichomeris argigastra*, sp. n. (Tab. III. fig. 16.)

*Antennae* dark brownish grey. *Palpi* recurved, slender, the median joint silvery at the base, with a brownish ochreous tuft above at its apex; terminal joint as long as the median, whitish above, with a fuscous band near the base and a fuscous line beneath to its apex. *Head* pale chestnut-brown. *Thorax* chestnut-brown, with a dark greyish fuscous streak down the middle; silvery white beneath; tegulae greyish fuscous. *Forewings* elongate, with parallel margins, rounded apex, and convex oblique termen: chestnut-brown, a greyish fuscous shade, commencing at the base, occupies the space between the costa and the fold and is attenuated outward and upward from the middle of the fold, breaking at its outer extremity into lines which follow the costal veins nearly to the apex; on this shade are three yellowish ochreous lines, one commencing at the base and running to the middle of the costa, the other two beyond it running from the cell nearly to the costa; the terminal and dorsal veins are indicated by narrow greyish fuscous lines, of which there is a slight shade also around the apex before the chestnut-brown cilia. *Exp. al.* 13 mm. *Hindwings* broader than the forewings, not sinuate below the apex; greyish brown; cilia slightly paler. *Abdomen* greyish brown above, the anal extremity touched with chestnut-brown; underside silvery white. *Legs* smeared with brownish grey above; silvery white beneath.

*Type* ♂ (65565) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.



24. *Dichomeris daedalea*, sp. n. (Tab. III. fig. 17.)

*Antennae* ciliate  $1\frac{1}{2}$ ; greyish. *Palpi* bright ochreous, tinged with fuscous towards the apex of the terminal joint. *Head* grey. *Thorax* greyish fuscous, the tegulae shining grey. *Forewings* with a short shining grey basal patch, ill-defined externally where it is margined by a dark brown shade, extending to nearly half the wing-length and containing on the dorsum a shining lilac-grey patch; on the costa a slender shining steel-blue line, and beneath it two bright yellowish ochreous streaks, between which is a second submetallic line and two blackish length-streaks, one along the upper edge of the fold, the other, shorter, beneath the costa at one-third, followed by some pale whitish ochreous scaling; a broad central band, ill-defined on its inner side, consists of a shining steel-grey patch throwing up a projection to the upper angle of the cell, widely margined towards the costa and narrowly along its outer edge by tawny black; beyond this band the remaining portion of the wing is rich tawny chestnut, with a small whitish ochreous triangular patch on the costa, adjacent to the dark band; cilia shining bronzy brownish. *Exp. al.* 14 mm. *Hindwings* brownish fuscous; cilia scarcely paler. *Abdomen* brownish fuscous, laterally barred with shining white; underside white. *Legs*: anterior and median pairs yellowish, the tarsi shaded with purple; hind legs shining whitish, the tibiae bright yellow externally, with purplish hairs above and a dark purplish fuscous spot at their hinder extremities, the tarsi shaded with fuscous, their extremities and spurs whitish.

*Type* ♂ (65556) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

25. *Dichomeris xerodes*, sp. n.

*Antennae* slightly serrate; greyish fuscous above, whitish ochreous beneath. *Palpi* very long, curved, divergent, the terminal joint of equal length with the median; whitish ochreous, median joint with a strong brush projecting, especially on the upper side, shaded with greyish fuscous to more than half its length; terminal joint with a fuscous band around the middle and a shade of the same on the underside towards the apex. *Head* whitish ochreous. *Thorax* greyish fuscous; the tegulae whitish ochreous, with greyish fuscous spots at their base. *Forewings* whitish ochreous, mottled and streaked with greyish fuscous and rich ferruginous; at the base of the costa a small greyish fuscous spot is followed by one a little darker, separated from the margin by a paler shade of the same which follows the costa to nearly half the wing-length, where it is diffused downwards on the upper half of an outwardly curved pale central fascia; before this central space a large greyish fuscous patch lies near the base of the dorsum, reaching above the fold and terminated at its upper edge by a rich ferruginous streak with bright ochreous streaks above it; the pale central space is margined on its inner side by a diffused rich ferruginous patch, mixed with ochreous scales and crossing the fold, some similar colouring in a small spot below the costa and on the dorsum nearer to the base; beyond the pale central space an irregular band of rich ferruginous throws out broken diverging lines of the same colour towards the apex and termen, alternating with greyish fuscous shading, which also marks the apex and termen, accumulating at the tornus; cilia whitish ochreous. *Exp. al.* 14.5 mm. *Hindwings* tawny brownish; cilia scarcely paler. *Abdomen* tawny brownish; anal tuft whitish ochreous. *Legs* whitish ochreous, the tibiae of the median pair thickly clothed; posterior tibiae with two greyish fuscous bands externally, the hind tarsi with one narrow broad band of fuscous above.

*Type* ♂ (65557) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65558) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Two specimens.

On the underside of the forewings appears a well-marked cavity at the base of the cell, the lower edge of which is slightly ciliate, a somewhat similar cavity giving a puckered appearance to the limbus of the hindwings.



26. **Dichomeris xuthostola**, sp. n. (Tab. III. fig. 18.)

*Antennae* ochreous, banded above with fuscous. *Palpi* reddish ochreous, the median joint long, fringed above on its outer half; terminal joint shorter than median, slender, with a fuscous ring before its apex. *Head* and *Thorax* reddish ochreous. *Forewings* reddish ochreous, with a broad diffused ferruginous shade along the dorsum from the base, embracing the outer half of the fold, a slight shade of the same colour on the outer half of the costa reaching to the apex; a single brownish fuscous dot at the end of the cell and a narrow broken shade of the same around the apex and termen at the base of the ochreous cilia. *Exp. al.* 14 mm. *Hindwings* trapezoidal, broader than the forewings; brownish grey; cilia greyish, becoming ochreous around the apex. *Abdomen* brownish grey above, pale ochreous beneath; anal tuft pale ochreous. *Legs* pale ochreous, the tibiae slightly hairy above.

*Type* ♂ (65559) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

27. **Dichomeris lyrella**, sp. n. (Tab. III. fig. 19.)

*Antennae* pale fawn. *Palpi* with the median joint smooth, but slightly widened, the terminal joint recurved, acuminate, as long as the median; pale fawn. *Head* and *Thorax* pale fawn. *Forewings* elongate, slightly widened outwardly, apex depressed, angular, termen oblique, tornus rounded; fawn-brown, with each vein distinctly marked in pale fawn-ochreous; a small darker brown spot on the disc, before the middle of the wing, has an elongate spot of the same colour straight below it in the fold, and is followed by another at the end of the cell; a slender dark terminal line, more or less broken into spots, is visible also on the under side; cilia pale fawn-ochreous. *Exp. al.* 15 mm. *Hindwings* pale straw-grey; cilia whitish. *Abdomen* (missing). *Legs* whitish ochreous.

*Type* ♀ (65575) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Panima, 1800 ft., 8-15. X. 1879 (*G. C. Champion*). Unique.

28. **Dichomeris subalbella** Chmb.

=†*subalbusella* Chmb.; n. syn. = *inaequapulvella* Chmb.; = *chambersella* Mrtf.

*Gelechia subalbusella* Chmb. Can. Ent. 6 242 (XII. 1874)<sup>1</sup>. *Gelechia inaequepulvella* Chmb. Cin. Qr. Jr. Sc. 2 239 (1875)<sup>2</sup>; Bull. US. GG. Surv. 4 144 (1878)<sup>3</sup>; Hgn. Pap. 4 99 (1884)<sup>4</sup>; Riley, Smith's List Lp. Bor-Am. 101 sp. 5388 (1891)<sup>5</sup>. *Gelechia chambersella* Mrtf. [Can. Ent. 6 222 (XII. 1874)<sup>6</sup>; Chmb. Cin. Qr. Jr. Sc. 2 240 (1875)<sup>7</sup>; Bull. US. GG. Surv. 4 116, 142 (1878)<sup>8</sup> LN.] Can. Ent. 13 242-3 (1881)<sup>9</sup>; Riley, Smith's List Lp. Bor-Am. 100 sp. 5336 (1891)<sup>10</sup>. *Trichotaphe chambersella* Busck Bull. US. Nat. Mus. 52 506 sp. 5667 (1902)<sup>11</sup>; Pr. US. Nat. Mus. 25 907, 913-4 (1903)<sup>12</sup>; Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6347 (1903)<sup>13</sup>. *Gelechia subalbusella* Riley, Smith's List Lp. Bor-Am. 102 sp. 5485 (1891)<sup>14</sup>; Busck Bull. US. Nat. Mus. 52 518 sp. 5826 (1902)<sup>15</sup>; Pr. US. Nat. Mus. 25 901 (1903)<sup>16</sup>; Krft. Smith's Check List Lp. Bor-Am. 112 sp. 6322 (1903)<sup>17</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-17</sup>, ⊕ *Ambrosia artemisiaefolia*<sup>6-9, 12</sup>—DISTRICT OF COLUMBIA<sup>12</sup>; Washington<sup>12</sup>—NORTH CAROLINA: 1883 (*H. K. Morrison*)—KENTUCKY<sup>12</sup>—MISSOURI<sup>2, 4, 6-9, 11-12</sup> VII<sup>9</sup>, IX<sup>9</sup>—TEXAS<sup>1, 15-16</sup>: BOSQUE<sup>1</sup>: Waco, VII<sup>1</sup>—CALIFORNIA<sup>12</sup>: LOS ANGELES<sup>12</sup>. Central America—MEXICO: SONORA: 1883 (*H. K. Morrison*).

The Mexican specimens are all more or less worn, but the characteristic markings are traceable in two or three of them.

The two idionyms *Gelechia chambersella* Mrtf. (p. 222) and *Gelechia subalbusella* Chmb. (p. 242) appeared in the same part of the Canadian Entomologist, in December 1874; *subalbusella* Chmb. was described (!), but for various reasons, given by Miss Murtfeldt, the description of *chambersella* did not appear until 1881.

### 29. *Dichomeris hypochloa*, sp. n. (Tab. III. fig. 23.)

*Antennae* pale cream-ochreous; biciliate  $1\frac{1}{2}$  in the ♂. *Palpi* long, slender, median joint closely and smoothly clothed, terminal joint acuminate, shorter than the median, also slightly scaled; pale cream-ochreous. *Forewings* elongate, the costa slightly raised towards the base, apex depressed, obtuse, termen oblique; pale cream-ochreous, a brownish spot at the end of the cell, preceded by another beyond the middle of the fold, both very faintly indicated, a strong dark chestnut-brown streak along the upper part of the termen; cilia pale cream ochreous. *Exp. al.* 14 mm. *Hindwings* broader than the forewings, trapezoidal, not indented below the apex; rosy grey, with very pale ochreous cilia. *Abdomen* pale greyish ochreous. *Hind Legs* pale cream-ochreous, unspotted.

*Type* ♂ (35612) Mus. Wlsm. BM.

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*). Unique.

Nearly allied to 5668 *lactiflorella* Chmb., but of deeper yellow colour and lacking the dark discal markings.

### 30. *Dichomeris mistipalpis*, sp. n. (Tab. III. fig. 24.)

*Antennae* dark grey above, fading to pearly grey beneath; basal joint tinged with ochreous. *Palpi*, with the median joint pearly grey at the base and beneath; the spreading hair-tuft above yellowish ochreous, the apex of the joint white; terminal joint black at the base, pearly grey beyond to the apex. *Head* grey in the middle above, the sides and face yellowish ochreous. *Thorax* grey, in the middle streaked with reddish brown, the sides ochreous; tegulae ochreous, reddish brown at their base. *Forewings* pale ochreous, shaded with reddish brown, and streaked on the brown shades with dark steely greyish fuscous; the markings consist of an elongate costal shade, from the base nearly to the middle, in which the grey streaks predominate; a small patch between this and the fold, at one-fourth, with a short streak a little beyond it on the cell; a strong shade along the dorsal third, from base to tornus, connected with a broad fascia beyond the middle, through which the dark fuscous streaks follow the venation and are faintly indicated in the pale ochreous space beyond, especially toward the tornus; cilia pale ochreous along their base, a brownish line beyond, outer half pearly greyish. *Exp. al.* 14 mm. *Hindwings* and cilia greyish fuscous. *Abdomen* (missing). *Legs* pale pearly grey, a slightly darker shade along the outer side of the hind tibiae.

*Type* ♂ (5785 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

### 31. *Dichomeris habrochitona*, sp. n. (Tab. III. fig. 26.)

*Antennae* greyish fuscous above, whitish ochreous beneath. *Palpi* pearly whitish, the median joint somewhat shaded with grey toward the base, its tuft slightly tinged with ochreous; the terminal joint greyish fuscous on its inner side, with an oblique whitish streak about the middle, whitish on its outer side with an oblique black band near its base. *Head* pale ochreous; face whitish. *Thorax* ochreous. *Forewings* ochreous, a dark, steely greyish fuscous shade runs along the costa from the base nearly to the apex, except on the extreme costa which is very narrowly pale ochreous toward the base; along the lower edge of this shade the wing is streaked and sprinkled with reddish brown, and this, with a few reddish

scales above it, forms an indistinct subocelloid spot at a little more than one-third from the base; below this, and again a little beyond it, a few reddish brown scales are sprinkled across the wing, joining some slender length-streaks of the same colour on the dorsal area; there are a few indistinct groups of brownish scales along the termen before the pale ochreous cilia. *Exp. al.* 16 mm. *Hindwings* greyish fuscous, iridescent along the cell; cilia pale cinereous. *Abdomen* dull greyish ochreous. *Legs* pearly grey.

*Type* ♂ (5787 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

### 32. *Dichomeris cinnamicostella* Z.

*Epicorthylis cinnamicostella* Z. Hor. Soc. Ent. Ross. 13 332-3 Pf. 4:105<sup>a-b</sup> (1877)<sup>1</sup>.

*Type* ♂ Mus. Stgr.

*Hab.* PANAMA: CHIRIQUI (*Ribbe*)<sup>1</sup>.

This species, which has not been recognised among the material examined, appears to be closely allied to *habrochitona* Wlsm. in form of palpi and general colour, but lacks the ocelloid spot on the forewings.

### 33. *Dichomeris servilis*, sp. n. (Tab. III. fig. 25.)

*Antennae* pale ochreous. *Palpi* pale ochreous, the terminal joint sprinkled with fuscous scales below the middle, and again narrowly before its apex. *Head*, face, and *Haustellum* dull pale ochreous. *Thorax* purplish fuscous, streaked with ochreous at the sides behind the middle; tegulae with their inner halves ochreous. *Forewings* dark purplish fuscous, the dorsum narrowly streaked with ochreous sparsely sprinkled with fuscous, the upper edge of the ochreous dorsal streak throwing up two very slight angular projections, one before, and one just behind the middle; on the costa, at the point where it commences to be depressed to the apex, is a small whitish ochreous spot, giving rise to a slender faint line of pale ochreous scaling, which is continued straight across to the tornus, and to a series of about seven pale ochreous marginal dots continued also to the tornus; beyond these spots the base of the pale dusky greyish cilia is indicated by a dark fuscous line. *Exp. al.* 13 mm. *Hindwings* greyish fuscous; cilia slightly paler, with a slender whitish ochreous line along their base. *Abdomen* and *Legs* greyish fuscous.

*Type* ♀ (5786 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

### 34. *Dichomeris* (?) *viretella* Z.

*Gelechia* (*Teleia*) *viretella* Z. Hor. Soc. Ent. Ross. 13 340-1 Pf. 4:110 (1877)<sup>1</sup>.

*Type* ♀ (*Sommer Coll.*) Mus. Stgr.

*Hab.* [Central America?]

Zeller described this species from a single ♀ "dessen Vaterland wahrscheinlich das wärmere Amerika ist, aus der Sommerschen Sammlung im Museum Staudinger"<sup>1</sup>. The exact locality is unknown, but the type was probably collected in Central America. This species is perhaps a *Dichomeris* of the *Trichotaphe* group, but no example has been available for examination.

35. *Dichomeris ribbeella* Z.

*Gelechia (Helcystogramma) ribbeella* Z. Hor. Soc. Ent. Ross. **13** 369-71 Pf. 5 · 126<sup>a-b</sup> (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

*Hab.* PANAMA: CHIRIQUI (*Ribbe*)<sup>1</sup>.

## MENESTA Clms.

=†*MENESTRA* Chmb. = *HYALE* Chmb.

Type: *Menesta tortriciformella* Clms. (Clms. 1860).

*MENESTA* Clms. Pr. Ac. Nat-Sc. Phil. **12** 213 (1860): Clms-Stn. Tin. N-Am. pp. x, 151-2 (1872); Wkr. Cat. Lp. BM. **29** 779 (1864). *HYALE* Chmb. Cin. Qr. Jr. Sc. **2** 241-3 (1875): Bull. US. GG. Surv. **4** 150 (1878): Jr. Cin. Soc. NH. **2** 198 tf. 201 · 8 (1880). *MENESTRA* Chmb. Bull. US. GG. Surv. **4** 157 (1878). *MENESTA* Wlsm. Pr. Z. Soc. Lond. **1881** 319 (1881): US. Dp. Agr. Div. Ent. Ins. Life **2** 154-5 (1889); Mrtf. US. Dp. Agr. Div. Ent. Ins. Life **2** 303-5, tf. 303 · 63 (1890); Riley, Smith's List Lp. Bor-Am. 99 sp. 5227-8 (1891); Busck Bull. US. Nat. Mus. **52** 505 sp. 5650-2 (1902): Pr. US. Nat. Mus. **25** 772, 902-4, 937 Pf. **31** · 30 (1903); Krft. Smith's Check List Lp. Bor-Am. 112 sp. 6329-32 (1903).

1. *Menesta albiciliella* Chmb.

=†*albaciliaeella* Chmb.; = *argenticiliaeella* Chmb.<sup>6</sup>

*Strobisia albaciliaeella* Chmb. Can. Ent. **10** 77-8 (1878)<sup>1</sup>: Bull. US. GG. Surv. **4** 162 (1878)<sup>2</sup>. *Strobisia argenticiliaeella* Chmb. Bull. US. GG. Surv. **4** 162 (1878)<sup>3</sup>. *Strobisia albaciliaeella* Riley, Smith's List Lp. Bor-Am. 104 sp. 5580 (1891)<sup>4</sup>. *Strobisia argenticiliaeella* Riley, Smith's List Lp. Bor-Am. 104 sp. 5581 (1891)<sup>5</sup>. *Menesta albaciliaeella* Busck Bull. US. Nat. Mus. **52** 505 sp. 5652 (1902)<sup>6</sup>: Pr. US. Nat. Mus. **25** 903-4 (1903)<sup>7</sup>; Krft. Smith's Check List Lp. Bor-Am. 112 sp. 6332 (1903)<sup>8</sup>.

*Antennae* brownish cinereous. *Palpi* slender, whitish cinereous. *Head* cinereous. *Thorax* leaden grey. *Forewings* leaden grey, with a slight purplish tinge, and a greenish gloss beyond and below the end of the cell, a white reversed comma-shaped spot at the end of the cell pointing inwards and upwards; the base and points of the brownish cinereous cilia are distinctly white at the apex and a little below it. *Exp. al.* 8 mm. *Hindwings* and cilia dark brownish, with a faint purplish tinge. *Abdomen* dark leaden grey. *Legs* cinereous, shaded with leaden grey.

NT. ♀ (65637 *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* AMERICA, N-C. United States<sup>1-8</sup>—NEW JERSEY<sup>6-7</sup>: 17. VI. (*W. D. Kearfott*)<sup>7</sup>—OHIO<sup>1, 6-7</sup>: CINCINNATI (*C. Dury*)<sup>1, 7</sup>. Central America—MEXICO: TABASCO: *Teapa*, III. (*H. H. Smith*).

## ATHRINACIA, gen. n.

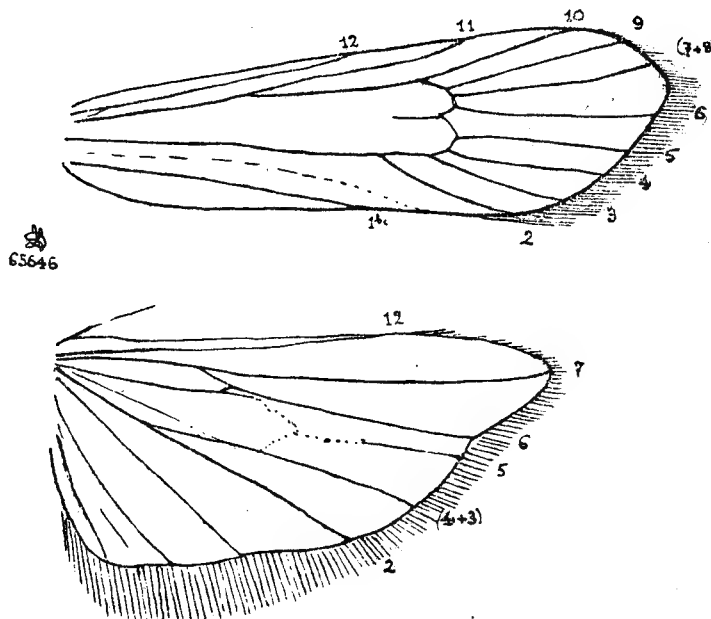
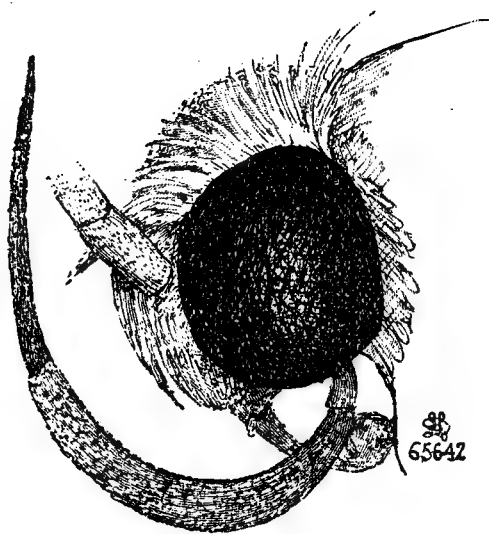
(α = privation; θρίναξ = a trident.)

Type: *Athrinnacia xanthographa* Wlsm. (Tab. III. fig. 27.)

*Antennae*  $\frac{4}{5}$ , smooth, rather stout in ♂; without pecten. *Labial Palpi* long, recurved, smooth; terminal joint as long as median. *Maxillary Palpi* short, dependent. *Haustellum* well-developed, scaled at base. *Ocelli* absent. *Head* with upward-spreading side-tufts. *Thorax* smooth. *Forewings* widening outward

from a narrow base, costa straight, apex depressed, obtuse, termen oblique, tornus rounded: *neuration* 11 veins; 7-8 coincident, to costa; 2-6 separate, 2 remote from 3; 1 not basally furcate (1° obsolete). *Hindwings*  $1\frac{1}{2}$ , apex obtuse, termen sinuate; cilia  $-\frac{1}{2}$ : *neuration* 7 veins; 3-4 coincident in ♂ and ♀; 5 subobsolete, cubital; 6-7 separate, but approximate. *Abdomen* smooth. *Legs*: hind tibiae slightly hairy above.

This genus differs from *Dichomeris* Hb. in the separation of FW: 2-3, in which it agrees with *Nothris* Hb., but is separable by the coincidence of HW: 3-4; this character is apparently new among American *Gelechiadae*.



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21. *Athrinacia xanthographa* Wlsm. ♂.

### 1. *Athrinacia trifasciata*, sp. n.

*Antennae* rather stout, shorter than the forewings; lilac-grey. *Palpi* slender, smooth, slightly recurved, the terminal joint about as long as the median, acute; whitish ochreous. *Head* rather rough above; whitish ochreous. *Thorax* mottled, or streaked alternately, with lilac-grey and straw-yellow. *Forewings* bright straw-yellow, with three lilac-grey transverse fasciae, each narrowly margined by a darker line; the first, leaving the costa at one-third from the base, is obliquely attenuated downward reverting to the dorsum from the fold; the second, rather wider at about the middle, is outwardly sinuate on the cell; the third, at the commencement of the costal cilia, moderately straight, but broken and diffused on its outer edge toward the termen, which is marked by a narrow toothed line of pale tawny brown running around the apex; along the base of the dorsum is a narrow, elongate, lilac-grey streak; between the first and second fasciae is a tawny brown dorsal spot, another lying beyond the end of the cell between the second and third fasciae; cilia bright pale ochreous. *Exp. al.* 13 mm. *Hindwings* pale grey; cilia shining, inclining to ochreous. *Abdomen* brownish grey. *Legs* shining, yellowish white; the hind tarsal joints very faintly spotted, the anterior pairs of legs streaked and spotted with dark brown.

*Type* ♂ (65649) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65650) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

### 2. *Athrinacia xanthographa*, sp. n. (Tab. III. fig. 27.)

*Antennae* simple; yellowish brown, yellowish at the base beneath. *Palpi* yellow, slender throughout, the median joint shaded with brownish externally. *Head* brownish grey above, yellow at the sides. *Thorax* brownish grey. *Forewings* lilac-grey, with pale yellow bands and spots enclosing patches of yellowish brown, these are distributed as follows: a yellow patch at the base is produced along the upper edge of the cell, emitting an ocelloid patch with brown centre which reaches to the dorsum at one-fourth; a

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central band of yellow encloses a small triangular brown spot on the costa and a larger dorsal spot slightly beyond it, a yellow spot lying between this and a third yellow band, crossing the wing before the costal cilia and enclosing an elongate brown patch and a small costal spot; beyond this a brown costal spot occurs at the commencement of the costal cilia and is followed by a chain-like, wavy line, of brown around the apex and termen which is inwardly margined with yellow; a small yellow patch lies across the apical veins beyond the end of the cell, sometimes enclosing brown specks; cilia yellowish grey. *Exp. al.* 13-14 mm. *Hindwings* pale greyish; cilia yellowish grey. *Abdomen* brownish grey. *Legs* whitish ochreous, with some yellowish brown spots on the tarsal joints.

*Type* ♀ (65641); ♂ (65642) *Amula*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65644-5, 65647) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*); *Amula*, 6000 ft., VIII-IX. (*H. H. Smith*). Seven specimens.

### 3. *Athrinacia leucographa*, sp. n.

*Abdomen* stone-grey. *Palpi* cinereous, the median joint not thickened, broadly banded with greyish fuscous; the terminal joint about as long as the median, recurved, with two greyish fuscous bands, one broad, reaching beyond the middle, the other narrower, before the apex. *Head* stone-grey, with a brownish tinge; much roughened above, the face also roughly clothed. *Thorax* fawn-brownish, sprinkled with pale cinereous. *Forewings* whitish cinereous, thickly shaded and dusted with fawn-brown, of which there is also a small patch at the base of the costa reaching to the fold, a larger patch at one-third, from the upper edge of the cell, reaching to the dorsum and somewhat dilated on the fold, and a narrow transverse patch at the end of the cell, with a series of small marginal blotches commencing beyond the middle of the costa and continued around the apex and termen to the middle of the dorsum; these are all narrowly margined or separated from each other by the pale ground-colour, as distinguished from the more sprinkled and shaded portions of the wing; cilia pale cinereous. *Exp. al.* 11 mm. *Hindwings* and cilia pale brownish grey. *Abdomen* fawn-brown; anal tuft pale cinereous. *Legs* pale cinereous, with two tibial and three tarsal pale brownish grey bands externally.

*Type* ♂ (65651) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65652) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: *Amula*, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

## EUPRAGIA, gen. n.

(εὐπραγία = favourable progress.)

*Type*: *Eupragia solida* Wlsm. (Tab. III. fig. 28.)

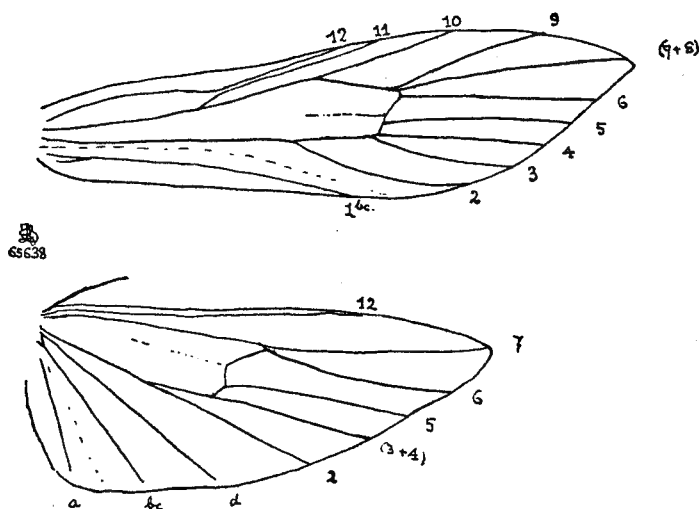
*Antennae* ♂  $\frac{3}{4}$ , stout, simple, somewhat flattened on the basal half, smooth, the basal joint not notched; ♀ simple, more slender. *Maxillary Palpi* short. *Labial Palpi* recurved, smooth, median joint thickened with smooth appressed scales; terminal joint longer than median, acute, rising high above the vertex. *Haustellum* strongly developed, smooth. *Head* with strong side-tufts projecting over the face; face roughly scaled. *Thorax* densely scaled, smooth. *Forewings* with the costa slightly arched towards the base, flattened in the middle, and thence slightly depressed; apex pointed, termen very oblique, dorsum straight, with a few long projecting scales on the margin near the base: *neuration* 11 veins; 7-8 coincident, connate with 9; 3-4 almost connate, 2 remote, 5 straight; 6 approximate at base to (7+8); 12 bent over and almost anastomosed with 11 near the origin of the latter, and thence approximate and parallel with it to the costa beyond the middle. *Hindwings* broadly triangular, towards the base twice as wide as the forewings; costa straight, termen and dorsum continuously, but very slightly, rounded: *neuration* ♀ 8 veins, 3-4 stalked; ♂ 7 veins, 3-4 coincident; 5 approximate to (3+4), 6-7 almost connate. *Abdomen* long, tapering from a broad base, smooth above, rather roughly scaled at the sides beyond the middle. *Legs*: hind tibiae roughly scaled with short brush-like hairs; tarsi also slightly hairy.



Allied to *Athrinacia* Wlsm., from which it differs in the longer labial palpi, in the peculiar curvature of FW: 12, and the connation of FW: 3-4. The ♀ differs also in having HW: 3-4 stalked, instead of coincident as in the ♂.



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22. *Eupragia solida* Wlsm. ♂.

### 1. *Eupragia solida*, sp. n. (Tab. III. fig. 28.)

*Antennae* very pale ochreous, shaded with umber-brown above at the base. *Palpi* whitish ochreous, the median joint shaded with umber-brown on its outer side to within one-third of its apex. *Head* and *Thorax* pale ochreous, the latter with an umber-brown median shade. *Forewings* dark fawn-brown, sprinkled and shaded with black scaling, the lines of neuration for the most part indicated by narrow whitish ochreous streaks, of which those on veins 2, 10, and 11 are perhaps the most conspicuous; the costa is narrowly streaked with whitish ochreous, and below the fold, from base to middle of dorsum, is another conspicuous whitish ochreous streak with roughly raised scales towards its base, beneath it an elongate black patch above the dorsum and a patch of projecting mixed brown and ochreous scales lying below this on the flexus; above the fold, but not reaching to the base, is also an elongate black patch, widening outward and diffused in scattered scales along the cell and along the upper edge of the fold; small transverse strigulae of similar black scales are found between the veins beyond the cell in the direction of both margins; at the end of the cell is a transverse crescent-shaped black spot, outlined with whitish ochreous, and placed somewhat obliquely, a smaller oval and similarly ocelloid spot on the cell half-way between this and the base; a narrow blackish terminal line preceding the cilia which are fawn-brown mixed with pale ochreous, (but of these there is very little left in the specimen described). *Exp. al.* 18 mm. *Hindwings* pale brownish fuscous, with a bluish grey sheen; cilia pale cinereous, with a brownish grey shade-line along their base. *Abdomen* fuscous, anal tuft whitish ochreous. *Legs* whitish ochreous.

*Type* ♂ (65638) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65639) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, II-III. (*H. H. Smith*). Two specimens.

### OESTOMORPHA, gen. n.

(*οἰστρος*=endurable; *μορφή*=form.)

*Type*: *Oestomorpha alloea* Wlsm. (Tab. III. fig. 29.)

*Antennae*  $\frac{2}{3}$ , without pecten. *Maxillary Palpi* short. *Labial Palpi* recurved to a little above the vertex. *Haustellum* well-developed, scaled at base. *Head* and *Thorax* smooth. *Forewings* elongate, apex depressed, rounded: *neuration* 11 veins, 7-8 coincident, to costa; 6 and (7+8) stalked; 3-4 stalked, 2 separate. *Hindwings* 1+, apex rounded, termen oblique, not sinuate, tornus rounded: *neuration*

8 veins; 3-4 connate; 6-7 stalked; 5 cubital, approximate to 4. *Abdomen* smooth. *Legs*: hind tibiae hairy.

Allied to *Eupragia* Wlsm. and *Athrinacia* Wlsm., but differing from both in having HW: 3-4 connate.

1. **Oestomorpha alloeae**, sp. n. (Tab. III. fig. 29.)

*Antennae* whitish cinereous. *Palpi* white, dusted with greyish fuscous on their outer sides. *Head* and *Thorax* dirty white; the latter densely and minutely sprinkled with greyish. *Forewings* elongate, costa and dorsum straight, apex rounded, termen obliquely rounded; dirty white, suffused and sprinkled with greyish fuscous accompanied by broken lines of blackish scales; on the rather less sprinkled costal portion of the wing is a narrow, greyish fuscous, costal length-streak, commencing at about one-third, interrupted by the white ground-colour near its base, and then continued along the costa to a little beyond the middle, a few blackish scales along its lower edge, while on the cell, below it, are two rather paler fuscous length-spots placed obliquely beyond and corresponding to its separate parts in length and position; below these is a broken line of blackish scales which is continued beyond them to the apex; a similar line runs along the fold, and there is a short streak of the same colour on the upper edge of the cell, near the base, and a spot on the fold at one-third, all the intermediate spaces being more or less sprinkled or suffused with pale greyish fuscous; around the apex and termen are about six greyish fuscous shade-spots with a few blackish scales; cilia dirty whitish, profusely sprinkled with greyish fuscous. *Exp. al.* 28 mm. *Hindwings* broader than the forewings, with straightened costa, a little depressed before the apex, apex rounded, termen obliquely convex; greyish brown, the spaces between the veins slightly inclined to be transparent; cilia greyish brown, a paler line along their base. *Abdomen* long and rather flattened posteriorly; greyish brown; anal tuft pale cinereous. *Legs* pale cinereous, dusted with fuscous externally; hind tarsi fuscous, with three pale cinereous annulations.

*Type* ♂ (5973 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: VERA CRUZ: Cordova, V. 1908 (F. Knab). Unique.

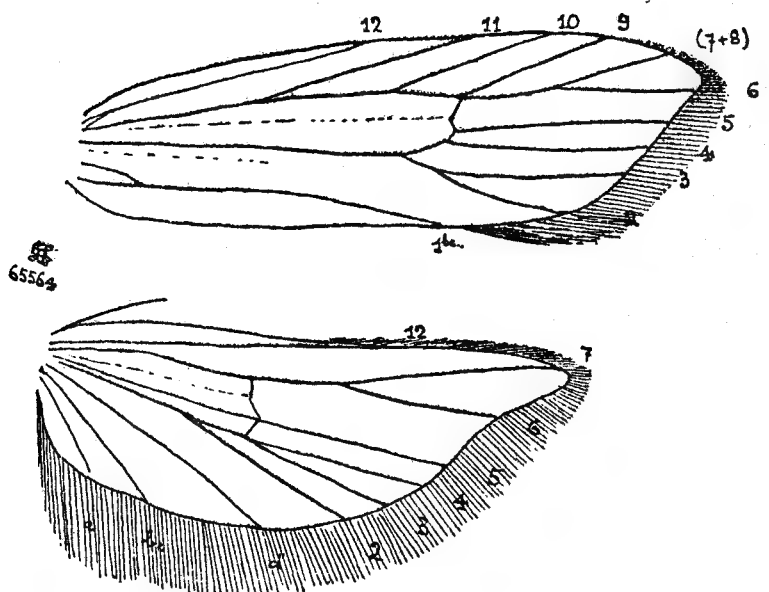
SCEPTEA, gen. n.

(σκεπτέα=to be considered.)

*Type*: *Sceptea decedens* Wlsm. (Tab. III. fig. 30.)



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23. *Sceptea decedens* Wlsm. ♂.

*Antennae*  $\frac{2}{3}^+$ , stout, smooth; basal joint without pecten. *Labial Palpi* recurved to a little above the vertex, the terminal joint not longer than the median, rather stout, obtusely pointed; both somewhat thickened

with smoothly appressed scales, laterally compressed. *Maxillary Palpi* short, straight. *Haustellum* clothed. *Head* and face thickly scaled. *Thorax* smooth. *Forewings* narrow, elongate, the costa slightly convex, apex depressed, rounded, termen oblique: *neuration* 11 veins; 7-8 coincident, to costa; 6 and (7+8) stalked; 9 connate with (7+8); 2-3 stalked; 4 and 5 somewhat approximate; 1 basally furcate. *Hindwings* rather broader than the forewings, apex produced, termen scarcely sinuate, dorsum rounded: *neuration* 8 veins; 3-4 connate, or short-stalked; 6-7 stalked; 5 straight, cubital. *Abdomen* smooth. *Legs*: hind tibiae rather densely clothed.

Near *Glyphidocera* Wlsm., from which it differs essentially in the stalking of FW: 6 and (7+8)—*aberratella* Busck will fall into this genus; it is a larger species than *decedens*, with darker head.

### 1. *Sceptea decedens*, sp. n. (Tab. III. fig. 30.)

*Antennae* ♂ without notch; dull greyish ochreous. *Palpi* pale ochreous, sprinkled with fuscous on the outer sides and around the apex of the terminal joint. *Head* and *Thorax* pale ochreous, much suffused with greyish fuscous. *Forewings* pale ochreous, suffused and sprinkled with olivaceous fuscous, tending to become concentrated in an ill-defined streak along the fold, a spot on the middle of the cell, another at the end of the cell becoming absorbed in an indistinct oblique transverse fascia from costal to dorsal cilia, a subterminal shade, and a few dark spots around the apex and termen; cilia dirty ochreous, a slight shade-line along their base. *Exp. al.* 9 mm. *Hindwings* brownish grey; cilia tending to brownish ochreous. *Abdomen* brownish grey. *Legs* very pale brownish, with three dark tarsal bands above.

*Type* ♂ (65560) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65561, 65563) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Five specimens.

## PTILOSTONYCHIA, gen. n.

(πτίλον=a feather; στόνυξ=a tusk.)

*Type*: *Ptilostonychia plicata* Wlsm. (Tab. III. fig. 31.)

*Antennae* ♂ notched beyond the basal joint. *Labial Palpi* recurved, reaching the length of the terminal joint above the head; median joint strongly tufted with rough scales of equal length, and blending with those on the rather shorter terminal joint, which is also strongly tufted with rough scales throughout in the ♂, but slightly less so in the ♀. *Maxillary Palpi* short. *Haustellum* scaled. *Head* with appressed scales. *Thorax* smooth. *Forewings* elongate, inclining to ovate, the termen slightly oblique; tornus rounded, but somewhat pronounced: *neuration*: 11 veins, 7-8 coincident, 6 and 9 separate; 2-3 stalked, 4 separate. *Hindwings* triangular, the termen and dorsum evenly, but only slightly convex; with a strongly raised blister-like elevation above vein 1<sup>c</sup> at the base in the ♂: *neuration* 8 veins, 6-7 stalked; 3-4 stalked, 5 approximate to 4. *Abdomen* smooth. *Legs*: hind tibiae only slightly roughened above.

This genus is derived from and very close to *Glyphidocera* Wlsm., with which it agrees absolutely in wing form and *neuration*, it differs however in the remarkably clothed labial palpi. The strong tufting of the terminal joint of the palpi occurs to some extent in both sexes and bears some resemblance in the ♂ to the genus *Stoeberhinus* Btlr.

### 1. *Ptilostonychia plicata*, sp. n. (Tab. III. fig. 31.)

*Antennae* fawn-brown. *Palpi* dark fawn-brown, the brush-like scales with a hoary sprinkling, through the tips of the scales fading to pale cinereous. *Head* and *Thorax* purplish fuscous. *Forewings* purplish fuscous, more especially at the base and along the upper side of the fold, fading to dark fawn-brown

outwardly, with a slight tinge of brownish ochreous towards the tornus, (partly caused by abrasion); the only mark is a faint indication of a dark spot at the end of the cell; cilia purplish fuscous. *Exp. al.* 13 mm. *Hindwings* dark brown, tending to brownish ochreous on the flexal area. *Abdomen* dark brown, with a brownish ochreous band across the middle; anal tuft brownish ochreous. *Legs* brownish ochreous, much shaded with dark brown, especially on their outer sides.

*Type* ♂ (5805); ♀ (5804 Wlsm. Det. 1908) US. Nat. Mus. [PT. (33641) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Three specimens.

The ♀ is decidedly paler in colouring than the ♂, the forewings inclining to ochreous, the hindwings to silky greyish.

### GLYPHIDOCERA Wlsm.

*Type:* *Glyphidocera audax* Wlsm. (Wlsm. 1892).

GLYPHIDOCERA Wlsm. Pr. Z. Soc. Lond. 1891 531-2, 547 no. 56 sp. 110 Pf. 41·8<sup>a-c</sup> (1892): 1897 97-8 no. 31 sp. 103-5 (1897); Busck Pr. Ent. Soc. Wash. 4 474-6 (1901): Bull. US. Nat. Mus. 52 507 sp. 5673-4 (1902); Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6353-4 (1903); Busck Pr. US. Nat. Mus. 25 772, 916-7 Pf. 32·34 (1903): 27 762-3 (1904): Jr. N-Y. Ent. Soc. 15 136-8 (1907): Pr. Ent. Soc. Wash. 9 88 (1908).

#### 1. *Glyphidocera salinae*, sp. n. (Tab. III. fig. 33.)

*Antennae* fawn-ochreous, faintly touched with fuscous above. *Palpi* pale fawn-brownish, very long, the median joint reaching to the level of the vertex; terminal nearly as long as the median. *Head* and *Thorax* fawn-brownish. *Forewings* uniformly fawn-brownish, without spots, but with a very slight shade at the end of the cell; cilia scarcely paler, a slender pale ochreous line along their base. *Exp. al.* 20 mm. *Hindwings* pale fawn-brownish; cilia slightly paler, with a slender ochreous line along their base. *Abdomen* fawn-brown. *Legs* fawn-brown, hind tarsi faintly tinged with ochreous.

*Type* ♀ (5807 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: OAXACA: Salina Cruz (*W. Schaus*). Unique.

A large, rather broad-winged species, of uniform colour, with the neuration as in the group of *speratella* Busck.

#### 2. *Glyphidocera elpista*, sp. n.

*Antennae* fawn-ochreous, transversely banded above with fuscous. *Palpi* fawn-ochreous, much smeared with fuscous on both joints, especially on the outer side. *Head* and *Thorax* fawn-ochreous, sprinkled with fuscous. *Forewings* fawn-ochreous, thickly sprinkled with fuscous, especially on the outer third; the usual discal spots are but faintly indicated, the median spot reaching to the fold, the outer one, slightly more distinct, at the end of the cell; cilia slightly paler than the wing. *Exp. al.* 10 mm. *Hindwings* brownish grey; cilia slightly paler, becoming somewhat darker towards the apex. *Abdomen* fawn-ochreous, smeared with fuscous. *Legs* pale fawn-ochreous, much smeared with fuscous on their outer sides, especially on the hind tibiae, leaving the joints indicated by paler spots.

*Type* ♀ (5808 Wlsm. Det. 1908) US. Nat. Mus. [PT. (33631) Mus. Wlsm. BM.]

*Hab.* PANAMA, CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Two specimens, both ♀♀.

A small species, with the neuration as in *speratella* Busck—this is its chief distinguishing character.

### 3. *Glyphidocera stygnota*, sp. n. (Tab. III. fig. 32.)

*Antennae* pale fawn, faintly barred with brownish fuscous. *Palpi* with the median and terminal joints of approximately equal length; median slightly recurved, scarcely thickened, smooth, whitish ochreous, with a short brownish fuscous band externally at its base, and another around its underside, scarcely before its apex; terminal joint straight, erect, somewhat stout, acuminate, brownish fuscous. *Head* and face whitish ochreous, very rough, with long brushed-back hair-scales above; the latter with appressed scales, scarcely rough. *Thorax* brownish fuscous, mixed with pale fawn. *Forewings* narrow, elongate, with straightened margins and scarcely depressed rounded apex, termen slightly oblique; pale fawn, much streaked and shaded with brownish fuscous, the middle of the costa very narrowly whitish ochreous; the brownish fuscous streaks follow the lines of the veins, but the space between them on the fold, along the cell, and from the cell to the tornus is much shaded with the same colour, almost obliterating a discal spot at one-third, another at the end of the cell, and a plical spot about half-way between them; cilia pale fawn, with a broad broken brownish fuscous shade along their base on the termen, on the lower half of which they are also shaded to their outer ends. *Exp. al.* 20 mm. *Hindwings* much broader than the forewings, slightly sinuate below the apex; brownish grey; cilia brownish grey, becoming pale fawn on their outer half around the apex. *Abdomen* brownish grey. *Legs* whitish ochreous, the tibiae slightly roughened, with a brownish grey streak along their outer sides; the basal half of the tibiae on the second pair of legs is dark brownish grey.

*Type* ♀ (65580) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*).  
Unique.

A somewhat distinct species, with the neurulation indicated by dark lines (FW: 7–8 coincident, 6 and 9 separate; 2–3 stalked).

### 4. *Glyphidocera rhypara*, sp. n.

*Antennae* subochreous. *Palpi* fawn-ochreous, dusted with fuscous. *Head* and *Thorax* pale fawn-ochreous. *Forewings* pale fawn-ochreous, minutely dusted with fuscous; a fuscous spot near the base on the upper edge of the fold is succeeded by a second spot in the middle of the fold, a third lying in the disc above and a little beyond it; a fourth spot at the end of the cell is produced downwards to its lower angle somewhat obliquely inward; a slight fuscous shade occurs along the termen and at the apex, and is reduplicated in the middle of the pale fawn-ochreous cilia. *Exp. al.* 14–15 mm. *Hindwings* 2, slightly sinuate below the apex; pale cinereous; cilia shining, with a slight ochreous tinge. *Abdomen* shining, pale fawn-ochreous. *Legs* pale cinereous, dusted externally with fuscous.

*Type* ♂ (65618); ♀ (65619) *Amula* Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65621–2, 35623) US. Nat. Mus.]

*Hab.* MEXICO: SONORA: 1883 (*H. K. Morrison*): GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Nine specimens.

A pale species belonging to the group of 5674 *aequepulvella* Chmb., with which it agrees in neurulation.

### 5. *Glyphidocera umbrata*, sp. n. (Tab. III. fig. 34.)

*Antennae* fawn-ochreous. *Palpi* greyish brown. *Head* and *Thorax* greyish brown. *Forewings* dark greyish brown, with paler brownish cinereous sprinkling about the basal third, across the wing-middle, and narrowly across the apical fifth in a line parallel to the termen; cilia pale brownish cinereous, with a dark greyish brown shade running along their middle. *Exp. al.* 16 mm. *Hindwings* and cilia

pale brownish cinereous. *Abdomen* greyish brown; anal tuft fawn-ochreous. *Legs* pale brownish cinereous.

*Type* ♂ (65624) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Coban (*G. C. Champion*). Unique.

A darker species than *rhypara* Wlsm., with which it agrees in neururation.

### 6. *Glyphidocera perobscura*, sp. n. (Tab. III. fig. 35.)

*Antennae* fawn-ochreous, shaded above. *Palpi* brownish fuscous, sprinkled with fawn-ochreous. *Head* and *Thorax* brownish fuscous. *Forewings* brownish fuscous, with a scarcely perceptible indication of three darker discal spots; cilia brownish cinereous. *Exp. al.* 12 mm. *Hindwings* rather paler than the forewings, brownish fuscous; cilia brownish cinereous. *Abdomen* brownish fuscous, sprinkled with elongate, pale brownish cinereous, hair-like scales above. *Legs* brownish fuscous, mixed with pale cinereous.

*Type* ♂ (65583) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, II. (*H. H. Smith*). Unique.

This species is still smaller than *umbrata* Wlsm., and of much darker colouring, especially in the hindwings. It is nearest to *floridanella* Busck, but differs in the absence of any indication of diluted paler bands on the dark ground-colour beyond the middle, and in the somewhat darker hindwings (the three species agree in neururation).

### 7. *Glyphidocera vestita*, sp. n.

*Antennae* pale fawn, faintly barred above with a darker shade of the same; ♂ with deeply incised notch beyond the basal joint. *Palpi* pale fawn, profusely dusted with a darker shade of the same. *Head* and *Thorax* fawn-colour. *Forewings* of approximately even width, the costa slightly but evenly convex; pale fawn, profusely sprinkled throughout with a darker or more fuscous shade of the same; three darker spots are faintly indicated, one on the cell at one-fifth from the base, another before the middle, reaching from the cell to the fold, and a third at the end of the cell; cilia concolorous with the wing, a slightly darker marginal shade-line sometimes preceding them. *Exp. al.* 10-12 mm. *Hindwings* and cilia brownish grey; rather coarsely scaled in the ♂, and with a prelibal rising fringe of subochreous hairs reaching to the flexus. *Abdomen* brownish grey; with a broad mat of yellowish ochreous scales on the anterior half above in the ♂. *Legs* shining, pale brownish cinereous.

*Type* ♂ (5810); ♀ (5811); *PTT.* (5812-3, 5815 Wlsm. Det. 1908) US. Nat. Mus. [*PTT.* (33632-6) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Ten specimens.

### 8. *Glyphidocera reparabilis*, sp. n.

*Antennae* fawn-ochreous, transversely barred above with fuscous; a slight notch beyond the basal joint in the ♂, frequently so much filled with scales as to be almost imperceptible. *Palpi* pale fawn, profusely dusted with fuscous, especially on their outer sides. *Head* and *Thorax* fawn-brownish. *Forewings* pale fawn, but so profusely sprinkled with brownish fuscous that the paler ground-colour is almost entirely obliterated; the usual discal spots are perceptible, one near the base, one, larger, before the middle, and one at the end of the cell, all dark fuscous; cilia fawn-greyish. *Exp. al.* 9-10 mm. *Hindwings* pale brownish grey, with no considerable thickening near the flexus. *Abdomen* fawn-brownish. *Legs* pale brownish cinereous.

*Type* ♂ (5820); ♀ (5821); *PTT.* (5825, 5827 Wlsm. Det. 1908). [*PTT.* (33637-40) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Eight specimens (one ♂, seven ♀♀).



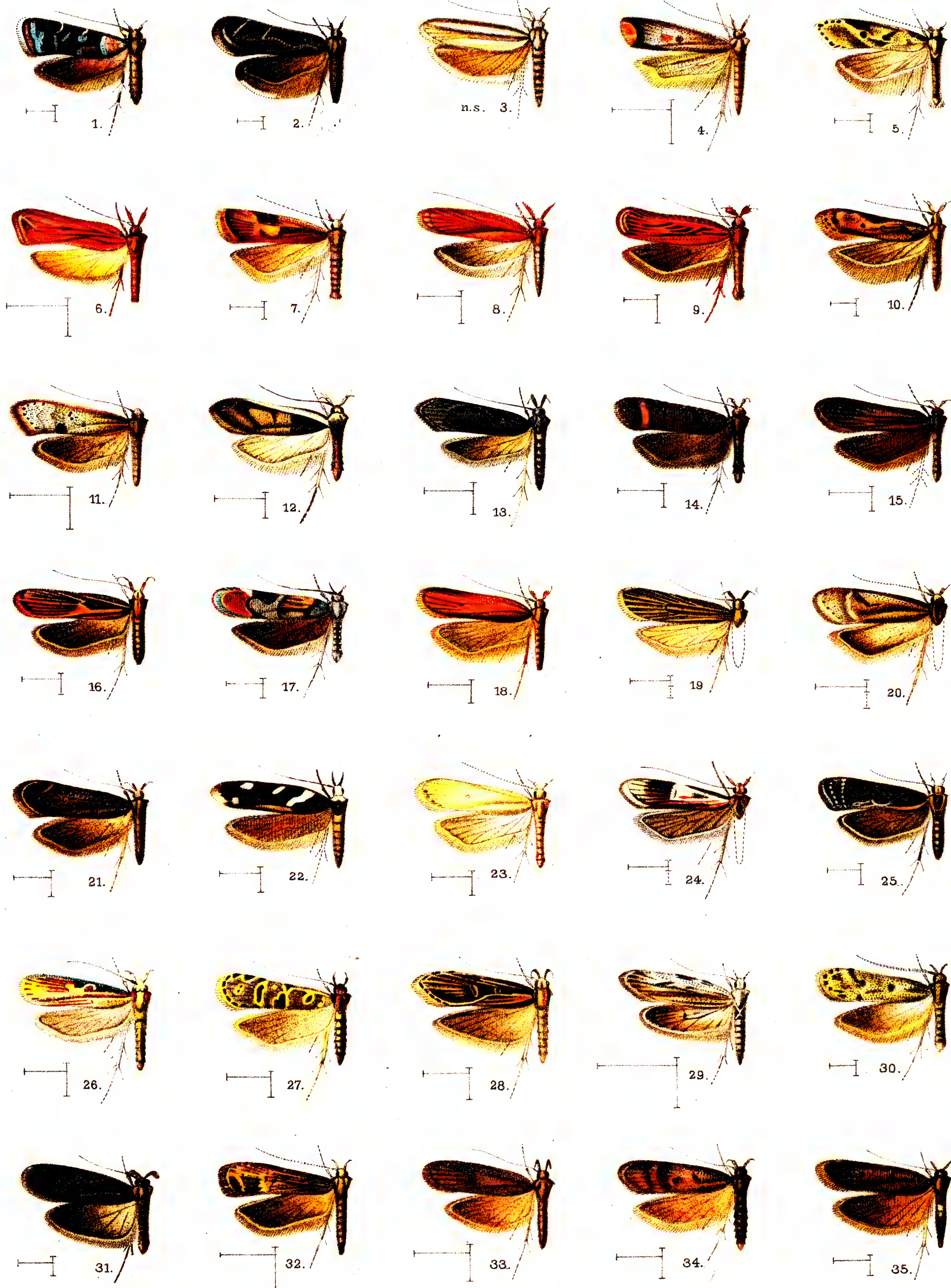
# HETEROCERA.

## TINEINA.

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F.W.Frohawke, del. A.J.J. Wendel, lith.

P.W.M. Trap, Chromo. Leiden.

TINEINA  
STROBISIA - GLYPHIDOCERA.



PART CCXI. B.]

[MAY 1912.

BIOLOGIA  
CENTRALI-AMERICANA;

OR,

CONTRIBUTIONS TO THE KNOWLEDGE  
OF THE  
FAUNA AND FLORA  
OF  
MEXICO AND CENTRAL AMERICA.

EDITED BY

F. DUCANE GODMAN

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ZOOLOGY.

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(Pp. 113-168, pls. iv., v.)

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# BIOLOGIA CENTRALI-AMERICANA.

SUBJECT IN PROGRESS.

## ZOOLOGY.

*Lepidoptera Heterocera.* Vol. IV. By LORD WALSINGHAM. (Pp. 1-168, pls. i.-v.)

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By J. T. GOODMAN. (Appendix: The Archaic Maya Inscriptions. Pp. xii & 150.)

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Allied to *vestita* Wlsm., but differing in the smaller notch in the antennae, and in the absence of thickened scale-mats on the hindwings and abdomen: both species have typical neuration (FW: 7-8 coincident, 6 and 9 separate; 2-3 stalked).

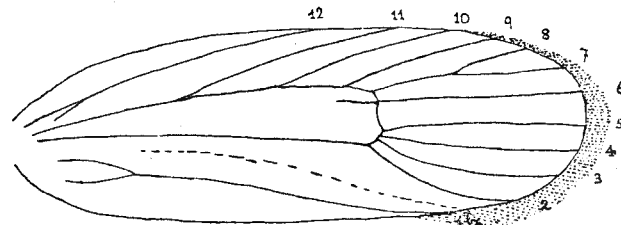
### ENERGIA, gen. n.

(ἐνέργεια = action.)

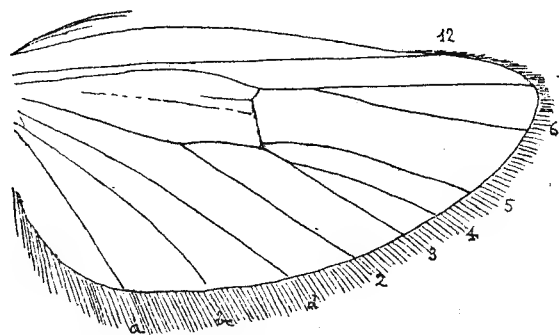
Type: *Energia subversa* Wlsm.



J. H. Durrant, del.



30  
65566



24. *Energia subversa* Wlsm. ♀.

*Antennae* simple, basal joint without pecten. *Maxillary Palpi* short. *Labial Palpi* long, recurved, smooth, median joint somewhat thickened with smoothly appressed scales; terminal joint long, but shorter than median. *Haustellum* scaled at base. *Head* with strong side-tufts, meeting above. *Thorax* smooth. *Forewings* with the costa slightly raised at the base, apex depressed, rounded: *neuration* 12 veins; 7-8 stalked, 7 to costa; rest separate, 2-5 approximate, from end of cell. *Hindwings* 1+, termen and dorsum evenly rounded: *neuration* 8 veins; 6-7 stalked; 3-4 stalked; 5 cubital, closely approximate and almost connate with stalk of (3+4). *Abdomen* smooth. *Legs*: hind tibiae only slightly roughened above.

An early form of the group of *Glyphidocera* Wlsm.; closely allied to *Durrantia* Busck, from which it differs in the form of the forewings, and in having FW: 2 approximate to 3, not remote as in that genus.

#### 1. *Energia subversa*, sp. n.

*Antennae* bone-white, faintly tinged with fawn-brownish above. *Palpi* white, the median joint fawn-brown externally to two-thirds. *Head* pale fawn-brownish; face white. *Thorax* pale fawn-brownish. *Forewings* rather shining, bone-white, with a wash of pale fawn-brownish, from base to termen along the dorsal half, its margins ill-defined; a short brownish fuscous streak to about one-sixth from the base, between the costa and the fold; a shorter streak of the same in the fold a little before its middle, with a small spot on the disc above it, and a strong spot at the end of the cell; this spot lies in the course of the first of the two oblique, transverse, pale fawn-brownish bands, which, dilated on the middle of the costa, descends obliquely outward to the end of the cell, and is thence recurved to the dorsum at

two-thirds; the second follows a parallel course, commencing on the costa at three-fourths—both diffused and ill-defined; a series of eight or nine dark brownish fuscous marginal spots occur around the apex and termen before the pale brownish cinereous cilia. *Exp. al.* 18 mm. *Hindwings* together with the cilia pale brownish grey; ♂, shining, white, with subcostal hair-pencil. *Abdomen* pale fawn-brownish above, whitish ochreous beneath. *Legs* shining, bone-whitish.

*Type* ♀ (65566) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65567) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*). Two specimens.

## 2. *Energia inopina*, sp. n. (Tab. IV. fig. 3.)

*Antennae* pale ochreous. *Palpi* whitish ochreous, the median joint stained with ferruginous externally, the terminal with a small rust-brown ring at its base and a wider one before its apex. *Head* brownish ferruginous; face whitish ochreous. *Thorax* brownish ferruginous, dark fuscous in the middle. *Forewings* whitish ochreous, with blackish costal spots, and a strong ferruginous brown shade extending over the whole dorsal half and touching the upper edge of the cell on its outer third; there is a short black line at the extreme base, with a longer one below it, the latter extending straight along the fold to half the wing-length; the costal spots consist of one, small, at one-fifth from the base, two larger patches on either side of the middle of the costa, which is slightly depressed, these are separated and partly limited beneath by a patch of snow-white scales, mixed with others corresponding to the costal patches; before the apex are two or three small dark brown costal spots, less conspicuous than those which precede them; cilia ochreous, tinged with brownish ferruginous; the apex and termen are almost evenly rounded, the costa raised along its basal third. *Exp. al.* 20 mm. *Hindwings* and cilia brownish grey. *Abdomen* brownish grey at the base, tinged with brownish ferruginous posteriorly. *Legs* bone-grey.

*Type* ♀ (65574) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Unique.

## DURRANTIA Busck.

*Type*: *Cryptolechia piperatella* Z. (Busck 1908).

DURRANTIA Busck Pr. US. Nat. Mus. 35 197–8 (1908).

## 1. *Durrantia pugnax*, sp. n. (Tab. IV. fig. 1.)

*Antennae* pale cream-ochreous. *Palpi* (broken). *Head* and *Thorax* pale cream-ochreous. *Forewings* pale cream-ochreous, sparsely dusted with dark fuscous scales, distributed for the most part singly, but in a small group at the end of the cell, and again in the fold at about half the wing-length, also in about five small terminal spots on the extreme margin; cilia pale cream-ochreous. *Exp. al.* 26 mm. *Hindwings* and cilia slightly paler than the forewings, and with a shining silky lustre. *Abdomen* cream-ochreous, with a brownish tinge above. *Legs* pale cream-ochreous, the hind tarsi slightly shaded with brown.

*Type* ♀ (65576) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo (*G. C. Champion*). Unique.

The species differs from *resurgens* Wlsm. in its larger size and somewhat more elongate forewings, as well as in the distribution of the fuscous sprinkling, which extends towards the base and indicates a series of marginal spots, wanting in that species.



## 2. *Durrantia resurgens*, sp. n.

*Antennae* pale straw-ochreous. *Palpi* with the terminal joint slightly shorter than the median; pale straw-ochreous. *Head* pale straw-ochreous. *Thorax* straw-ochreous, with a brownish tinge. *Forewings* with the costa moderately straight, apex depressed, rounded, termen very obliquely convex; pale straw-ochreous, sparsely peppered with dark brown scales beneath the costa and beyond the cell; a small dark brown spot on the middle of the cell and another at its outer end, with a marginal series of elongate spots around the apex and termen; cilia pale straw-ochreous. *Exp. al.* 22 mm. *Hindwings* pale straw-grey; cilia scarcely paler. *Abdomen* whitish ochreous, with a pale brownish ochreous patch near the base, another on the anal segments. *Legs* pale straw-ochreous.

*Type* ♀ (65571) Mus. Wlsm. (*Godm-Salv. Coll.*). [*PT.* (65572) US. Nat. Mus.]

*Hab.* GUATEMALA: Volcan de Atitlan, 2500–3500 ft. (*G. C. Champion*). Two specimens.

## 3. *Durrantia amabilis*, sp. n.

*Antennae* whitish ochreous, tinged from a little beyond the base with rust-brown. *Palpi* whitish ochreous, the slightly thickened median joint faintly smeared with rust-brown on its outer side; the long, slender, pointed terminal joint stained with the same at the apex. *Head* and *Thorax* whitish ochreous, the latter tinged with pale chestnut-brown. *Forewings* with the costa evenly arched, the apex much depressed, rounded; pale straw-ochreous, a shade of light chestnut-brown diffused along the dorsum, attenuate to the tornus and narrowly traceable along the termen and around the apex, above which it is slightly intensified, but becomes evanescent along the costa, recurring towards its base; a small spot of the same brownish colour at the end of the cell, and a few dark fuscous scales very sparsely scattered over the wing-surface; cilia shaded with light chestnut-brown. *Exp. al.* 24 mm. *Hindwings* shining, pale ivory-grey; cilia with a slight brownish tinge about the apex. *Abdomen* shining, ivory-grey, with a slight brownish tinge; ♀ with ovipositor strongly extruded. *Legs* whitish ochreous,

*Type* ♀ (65573, *V. de Atitlan*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (5789 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—MEXICO: MORELOS: Cuernavaca, VI. (*W. Schaus*)—GUATEMALA: Volcan de Atitlan, 2500–3500 ft. (*G. C. Champion*). South America—VENEZUELA: Aroa (*W. Schaus*, 1895). Three specimens.

Allied to *piperatella* Z., but of larger size, and of a yellower colour; it is also more sparsely dotted.

## 4. *Durrantia acompsa*, sp. n. (Tab. IV. fig. 2.)

*Antennae* pale ochreous. *Palpi* whitish ochreous, with a slight brownish stain on the basal half of the median joint externally. *Head* whitish ochreous. *Thorax* ochreous, with a faint brownish tinge. *Forewings* shining, pale ochreous, the costa very narrowly tinged with brownish ochreous, of which there is a minute dot at the end of the cell and a small group of long scales at the flexus; cilia pale ochreous, with an almost imperceptible brownish tinge along their base. *Exp. al.* 14 mm. *Hindwings* and cilia slightly paler than the forewings. *Abdomen* and *Legs* broken, but certainly pale ochreous.

*Type* ♂ (5955 Wlsm. Det. 1908) US. Nat. Mus.

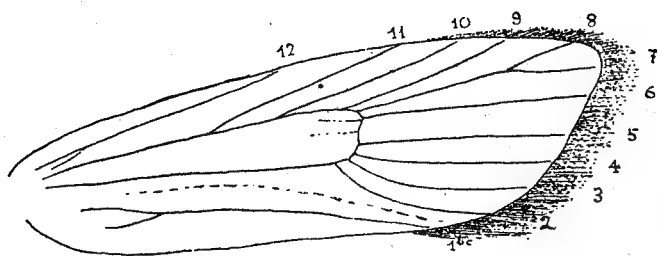
*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

## THEATRIA, gen. n.

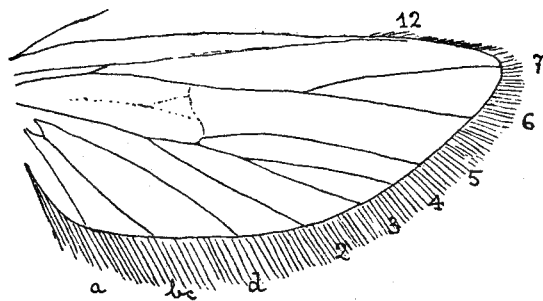
(θεάτρια = a spectator.)

Type: *Theatria spudasma*, sp. n. (Tab. IV. fig. 4.)

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65578

25. *Theatria spudasma* Wlsm. ♂.

*Antennae* biciliate; basal joint with projecting shield of scales, without pecten. *Labial Palpi* evenly recurved to above vertex, smooth; median joint with appressed scales; terminal joint shorter than median. *Maxillary Palpi* well-developed. *Haustellum* scaled. *Head* with appressed scales, tending to project in front continuously with the clothing of the basal joint of the antennae. *Thorax* smooth. *Forewings* somewhat narrow at the base, widening outwardly, costa moderately straight, apex slightly depressed, termen oblique: *neuration* 12 veins; 7-8 stalked, 7 to termen; 2-5 approximate, nearly equidistant; 1 basally furcate. *Hindwings* 1+; termen oblique, not sinuate, tornus evenly rounded: *neuration* 8 veins; 6-7 stalked; 3-4 stalked; 5 cubital, approximate to stalk of (3+4). *Abdomen* smooth. *Legs*: hind tibiae rather strongly clothed.

An early unspecialised genus allied to *Symmoca* Hb., from which it differs in the smooth palpi, and in the stalking of HW: 3-4.

1. *Theatria spudasma*, sp. n. (Tab. IV. fig. 4.)

*Antennae* fawn-grey; the basal joint with a shield of whitish scales. *Palpi* strongly divergent, evenly recurved to above the vertex; whitish, shaded with grey; the terminal joint shorter than the median. *Head* whitish, with a raised collar of closely packed scales behind, others appressed, projecting over the face. *Thorax* whitish, shaded with fawn-grey. *Forewings* somewhat narrow at the base, widened outwardly, costa moderately straight, apex slightly depressed, termen oblique; very pale whitish ochreous, much shaded throughout with fawn-grey, with the exception of a pale patch from the end of the cell to the outer end of the fold; a fuscous discal spot at one-third, followed by another at the end of the cell, with a plical spot below them nearer to the latter than to the former; a fuscous marginal shade extends along the termen and is broken into spots around the apex and at the base of the costal cilia; cilia ochreous, shading to fawn-grey at the apex and tornus. *Exp. al.* 17 mm. *Hindwings* whitish; cilia with a yellowish tinge. *Abdomen* (missing). *Legs* greyish white.

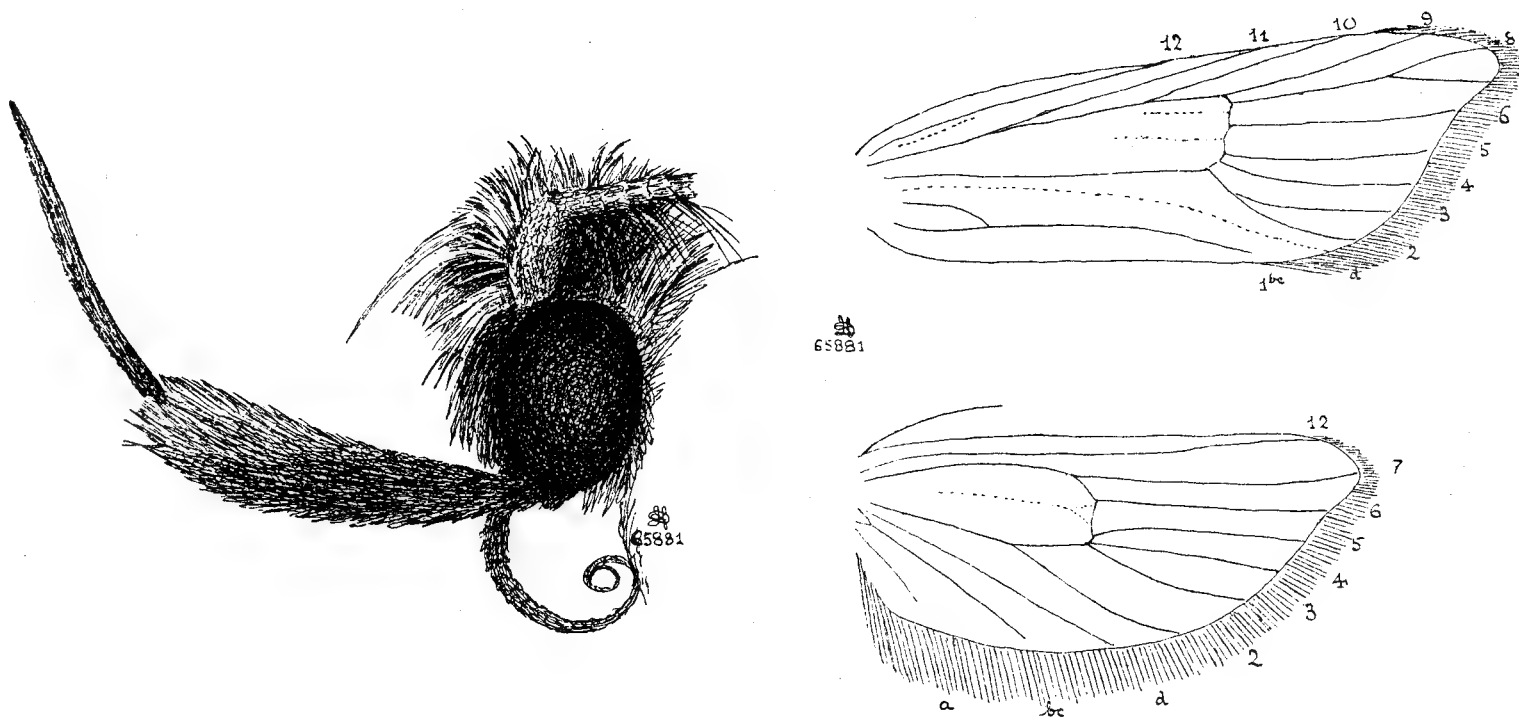
Type ♂ (65578) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800-1500 ft. (G. C. Champion). Unique.

## Fam. 3. OECOPHORIDAE.

## THAUMATOLITA, gen. n.

(θαύμα=a wonder; λιτός=unadorned.)

Type: *Thaumatolita hamifera* Wlsm. (Tab. IV. fig. 6.)

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26. *Thaumatolita hamifera* Wlsm. ♂.

*Antennae* biciliate (4); basal joint without pecten. *Labial Palpi* with the median joint very long, straight, laterally compressed, closely clothed, projecting more than twice the length of the head beyond it; terminal joint shorter than the median, suberect, slender, acuminate. *Maxillary Palpi* minute. *Haustellum* well-developed, clothed. *Ocelli* present. *Head* rough-scaled. *Thorax* smooth. *Forewings* with the costa and dorsum nearly straight, apex somewhat produced, pointed; termen very oblique, subsinuate below apex: *neuration* 12 veins; 7-8 stalked, enclosing the apex; 2-3 stalked; 4-5 somewhat approximate towards base; 1 basally furcate. *Hindwings* 1, termen slightly sinuate beneath apex, thence evenly rounded: *neuration* 8 veins; 6-7 separate and parallel; 3-4 connate; 5 parallel with 4, but slightly approximate toward base. *Abdomen* not flattened. *Legs*: anterior rather long; posterior rather short, hind tibiae hairy above, spurs short.

Apparently a development of *Cryptolechia* Z., with FW: 2-3 stalked, and modified palpi.

1. *Thaumatolita hamifera*, sp. n. (Tab. IV. fig. 6.)

*Antennae* stone-brownish. *Palpi* stone-whitish, the median joint shaded with dark umber-brown along its lower half. *Head* and *Thorax* stone-white. *Forewings* stone-whitish, with a slight brownish ochreous suffusion leaving two paler patches, the first, somewhat triangular, from the cell to the dorsum, the second, oblique, parallel with the termen beyond the cell; the first of these is outwardly margined by a dark brown streak, extending obliquely from the middle of the dorsum to the upper angle of the cell; the second, by a slender broken angular line of the same colour, crossing the terminal veins; near the base, below the costa, is a small dark brown spot, followed by a similar one on the cell, a little below

and beyond it at one-fourth; a larger dark brown spot lies on the middle of the costa, which is otherwise narrowly tinged with ochreous throughout; a broken dark brown terminal line precedes the base of the cilia, above and below the apex, extending to the tornus; costal cilia somewhat ochreous, terminal cilia stone-whitish. *Exp. al.* 20 mm. *Hindwings* and cilia pale cinereous. *Abdomen* and *Legs* cinereous, the tibiae and tarsi shaded with stone-grey.

*Type* ♂ (65881) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: MORELOS: Cuernavaca, VI. (*H. H. Smith*). Unique.

### PSILOCORISIS Clms.

= HAGNO Chmb.

*Type* 1: *Psilocorsis quercicella* Clms. (Busck 1908).

PSILOCORISIS Clms. Pr. Ac. Nat-Sc. Phil. 12 212-3 (1860): Clms-Stn. Tin. N-Am. pp. ix, 149-51 sp. 1-2 (1872); Z. Verh. ZB. Ges. Wien 23: 1873 Abh. 239 (1873). CRYPTOLECHIA Z. (PSILOCORISIS Clms.) Z. Hor. Soc. Ent. Ross. 13 258, 259, 261-3 sp. 1-5 (1877); Chmb. Bull. US. GG. Surv. 4 84, 162 (1878); Wlsm. US. Dp. Agr. (Div. Ent.) Ins. Life 2 150-1 (1889). PSILOCORISIS Busck Pr. Ent. Soc. Wash. 5 207 (1903); Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6390-5 (1903); Busck Pr. US. Nat. Mus. 35 189, 196-7 no. 7 (1908).

*Type* 2: *Hagno faginella* Chmb. (Chmb. 1872).

HAGNO Chmb. Can. Ent. 4 129-32, 191 (1872). CRYPTOLECHIA Z. (HAGNO Chmb.) Chmb. Bull. US. GG. Surv. 4 84, 150 (1878); Jr. Cin. Soc. NH. 2 198, tf. 202 · 10 (1880).

#### 1. *Psilocorsis argyropasta*, sp. n. (Tab. IV. fig. 8.)

*Antennae* pale fawn-ochreous, delicately banded above with brown on each joint. *Palpi* slender, recurved, smooth; pale ochreous, with a black line along their undersides to the apex. *Head* and *Thorax* pale ochreous, the latter much shaded with brown. *Forewings* pale fawn-ochreous, delicately striate transversely with brown throughout, the striae becoming somewhat confused obliquely across the end of the cell; termen narrowly dark brown, tending to break into spots near the apex; cilia brilliant metallic, changing from silvery to golden. *Exp. al.* 14 mm. *Hindwings* and cilia pale greyish ochreous, with a narrow brownish marginal line. *Abdomen* yellowish brown. *Legs* whitish ochreous; the anterior and median tarsi shaded with brown.

*Type* ♀ (65882, *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65883) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Four specimens.

The metallic cilia and conspicuous transverse striations render this small species easy of recognition; it is most nearly allied to 5851 *quercicella* Clms.

#### 2. *Psilocorsis indalma*, sp. n.

*Antennae* brownish ochreous, with three black lines along their basal third, two of which only extend along the basal joint, the upper one commencing immediately beyond it; the first two coalesce, and all are broken beyond the basal third into blackish annulations extending to the apex. *Palpi* ochreous, a black line along the lower side of the median joint, and two black lines along the terminal. *Head* brownish ochreous. *Thorax* tawny brownish. *Forewings* brownish ochreous, profusely sprinkled with fuscous, in a somewhat striate transverse form, the whole having a slight vinous suffusion; a fuscous spot lies at the end of the cell, and a smaller one on the cell half-way to the base; from the lower angle of the

cell a slightly curved shade extends to the tornus, and along the termen are five elongate blackish spots, with another in the same series at the apex, and another on the costa above it; apical and terminal cilia dull brownish cinereous. *Exp. al.* 29 mm. *Hindwings* and cilia pale brownish cinereous. *Abdomen* dull brownish cinereous. *Legs* pale brownish cinereous.

*Type* ♀ (65891) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65892) US. Nat. Mus.]

*Hab.* GUATEMALA: Totonicapam, 8500–10,000 ft., VIII. 1880 (*G. C. Champion*).  
Two specimens.

I was inclined to suppress this description and to regard *ingens* as a larger southern form of 5852 *reflexella* Clms., but after the remarks of Mr. Busck [*Pr. Ent. Soc. Wash.* 5 206–7 (1903)] when dealing with *quercicella* Clms. and its allies I feel justified in publishing the description and name, my series of *reflexella* including no specimen exceeding 23 mm. in expanse. One noticeable difference is to be found in the much more pronounced series of terminal spots, but the black lines along the base of the antennae exist also in *reflexella*, and possibly in other allied species: Mr. Busck's knowledge of the larvae of some of these seems to justify the opinion that I was somewhat too hasty in suppressing supposed species and including them in the synonymy of those described by Clemens [*vide* Wlsm. US. Dp. Agr. (Div. Ent.) *Ins. Life* 2 151–2 (1889)].

### 3. *Psilocorsis purpurascens*, sp. n. (Tab. IV. fig. 7.)

*Antennae* cinereous, annulate with purplish fuscous. *Palpi* cinereous, with one purplish fuscous line along the underside of the median joint, and three slender lines along the almost equally long terminal joint. *Head* and *Thorax* purplish grey. *Forewings* purplish grey, a narrow pale cinereous line along the extreme edge of the costa (somewhat broken up into spots on the basal half) is continued along the base of the terminal cilia; underlying the purplish grey colour of the wing is a faint indication of transverse, striate, pale cinereous mottling; cilia brownish cinereous. *Exp. al.* 18 mm. *Hindwings* and cilia dull brownish cinereous. *Abdomen* dark greyish. *Legs* pale brownish cinereous.

*Type* ♀ (65893, *V. de Atitlan*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65894) US. Nat. Mus.]

*Hab.* GUATEMALA: Volcan de Atitlan, 2500–3500 ft., XII. 1880 (*G. C. Champion*);  
Las Mercedes, 3000 ft., 1880 (*G. C. Champion*). Two specimens.

### DOXA, gen. n.

(δόξα = an opinion.)

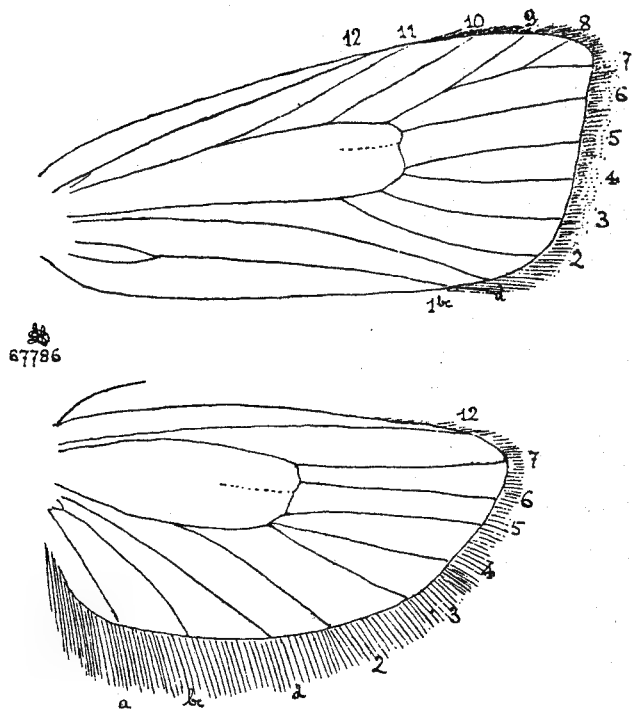
*Type*: *Doxa sodalis* Wlsm. (Tab. IV. fig. 5.)

*Antennae* biciliate; basal joint without pecten. *Labial Palpi* recurved to above vertex, clothed with smoothly appressed scales; terminal joint acute, slightly shorter than median. *Maxillary Palpi* short. *Head* and *Thorax* smooth. *Forewings* broadly dilated beyond the base, the costa almost straight, apex slightly depressed, obtuse, termen somewhat oblique, very slightly concave, tornus rounded: *neuration* 12 veins; 9 out of stalk of 7+8, 7 to termen; discoidal weak between 5 and 6; 5 approximate to 4; 2 remote, 3 not nearer to 2 than to 4; 1 basally furcate. *Hindwings* 1, the costa slightly convex, apex obtuse, termen and dorsum rounded: *neuration* 8 veins; 3–4 connate; 5 cubital; 6–7 separate and parallel; 12 not connected to radius. *Abdomen* moderate. *Legs*: hind tibiae and first two tarsal joints hairy above and beneath.





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27. *Doxa sodalis* Wlsm. ♂.

Apparently nearest to and developed from *Cryptolechia* Z. (*Machimia* Clms.), differing essentially in having FW: 9 out of the stalk of 7 and 8, in which it agrees with *Martyringa* Busck, *Hasta* Busck, *Hyphypena* Wrn., and *Mesothyrsa* Meyr. *Hasta* and *Martyringa* differ from *Doxa* in having FW: 2-3 stalked, the latter also in having HW: 3-4 coincident; *Hyphypena* may be distinguished by the clothed terminal joint of the palpi, and by the stalking of HW: 3-4. Such species of *Peleopoda* Z. as resemble *Doxa* in FW: 9 arising from the stalk of 7+8, may be recognised by the close approximation of FW: 2-3, by the densely clothed tibiae and tarsi, and by the less recurved palpi with shorter terminal joint. *Mesothyrsa* Meyr. [Jr. Bomb. NH. Soc. 20 162 (1910)] differs in the median joint of the palpi having "rough expanded hairs above towards apex."

1. *Doxa sodalis*, sp. n. (Tab. IV. fig. 5.)

*Antennae* cream-white. *Palpi* cream-white; median joint shaded with fuscous on the outer side, except toward the apex. *Head* and *Thorax* cream-white. *Forewings* and cilia shining, sericeous, cream-white.

*Exp. al.* 18-28 mm. *Hindwings* whitish; cilia cream-whitish. *Abdomen* and *Legs* whitish ochreous.

*Type* ♂ (67786, Ourem) Mus. Wlsm. BM. [PT. (6291 Drnt. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America — NICARAGUA: Chontales (*Janson*). South America — DUTCH GUIANA: Geldersland, Surinam River (*W. Schaus*) — BRAZIL: PARA: Ourem, 30. I. 1894 (*A. Schulz*). Three specimens.

The specimen from Chontales (65890) is in very poor condition, having lost its palpi and abdomen; it is figured Pf. 4·5.

## CRYPTOLECHIA Z.

=MACHIMIA Clms.

Type 1: *Cryptolechia straminella* Z. (Wlsm. 1881).

CRYPTOLECHIA Z. Kngl. Vet-Ak. Hndl. 1852 106-8 (1852): (p.) Lin. Ent. 9 353-82 sp. 1-26 Pf. 3·14-21 (1854): (p.) 10 145-68 Pf. 1·1-8 (1855); Mschl. Wien. Ent. Mts. 6 141-2 Pf. 1·14 (1862); Wkr. (p.) Cat. Lp. BM. 29 709-72 sp. 1-162 (1864): 30 1035-7 (1864): 35 1834 (1866); Stgr-Wk. Cat. Lp. Eur. 289 no. 192 sp. 1787 (1871); Z. (p.) Verh. ZB. Ges. Wien 23:1873 238-47 Pf. 3·12 (1873): 24:1874 436-41 Pf. 12·6-10 (1874): 25:1875 343-4 Pf. 10·51 (1875); F. & R. (p.) Reise Nov. Zool. Lp. 2 Pf. 138·35-8, ·41, ·47, ·51, ·54, ·57, ·64-5, ·67, 139·13, ·24, ·56, 140·34-5 (1875); Wlgrn. Öfv. Kngl. Vet-Ak. Förh. 32:1875 128-9 (1875); Z. (p.) Hor. Soc. Ent. Ross. 13 258-305 sp. 1-83 Pf. 3·76-88 (1877); Btlr. (p.) Cist. Ent. 2 163-4, 187-93 sp. 1-26 (1877); Chr. Hor. Soc. Ent. Ross. 12 294-5 Pf. 8·67 (1877); Chmb. (p.) Bull. US. GG. Surv. 4 84-6, 137 (1878); Plötz Stett. Ent. Ztg. 41 306 (1880); Btlr. Ann-Mag. NH. (5 s.) 5 394 (1880); Wlsm. (p.) Tr. Ent. Soc. Lond. 1881 252-7, 287 Pf. 11·21-4, 12·25-6 (1881); Pr. Z. Soc. Lond. 1881 312 (1881); Tr. Am. Ent. Soc. 10 175-7 (1882); Chr. Bull. Soc. Imp. Nat. Mosc. 57 19-21 sp. 148 (1882); Btlr. (p.) Tr. Ent. Soc. Lond. 1883 50-1, 80-1 sp. 61-4 Pf. 11·12 (1883); Meyr. Tr. Ent. Soc. Lond. 1883 124-5 (1883); Berg An. Soc. Ci. Argent. 19 280-2 (1885); Wlsm. Pr. Z. Soc. Lond. 1885 884 (1886); Moore's Lp. Ceyl. 3 519-20 Pf. 209·7-8 (1887); Btmlr. Ent. Am. 4 30 (1888); Swinh-Cotes Cat. Moths Ind. 717-8 sp. 4906-10 (1889); Wlsm. (p.) US. Dp. Agr. (Div. Ent.) Ins. Life 2 150-2 (1889); Tr. Ent. Soc. Lond. 1891 100-2, 114 Pf. 7·86 (1891); Snln. Tijd. Ent. 34 191 (1891); Riley (p.), Smith's List Lp. Bor-Am. 98 sp. 5216-24 (1891); Stgr. Ergbn. Hamb. Magalh. Sammelr. 4 111-12 Pf. 1·10 (1899); Stgr-Rbl. Cat. Lp. Pal. 2 168 sp. 3173-5 (1901); Dyar (p.) Bull. US. Nat. Mus. 52 519-20 sp. 5844-52 (1902); Busck Pr. Ent. Soc. Wash. 5 207 (1903); Krft. (p.) Smith's Check List Lp. Bor-Am. 113 sp. 6385-9 (1903); Dgn. Ann. Soc. Ent. Belg. 48 133-4 (1904): (p.) 49 88-9 (1905); Busck Pr. US. Nat. Mus. 35 189, 194-6 no. 6 (1908); Meyr. Jr. Bomb. NH. Soc. 20 155, 162-6 (1910); Rec. Ind. Mus. 5 224-5 (1910); Tr. Ent. Soc. Lond. 1910 456 (1910); Tr. NZ. Inst. 43:1910 75 (1911); Busck Pr. US. Nat. Mus. 40 212 Pf. 9·37 (1911).

Type 2: *Depressaria flava* Z. (Z. 1854).

CRYPTOLECHIA Z. Lin. Ent. 9 353-82 sp. 1-26 Pf. 3·14-21 (1854). CRYPTOLECHIA Z. (Abth. 3. CRYPTOLECHIA Z.) Z. Hor. Soc. Ent. Ross. 13 259-60 sp. 24-53, 263-85 sp. 4-19 Pf. 3·76-8 (1877).

Zeller (Lin. Ent. 9 354) wrote "als Typus für *Cryptolechia* sehe ich meine *Cr. flava* an"—but this was not one of the original geneotypes of *Cryptolechia* Z. Kngl. Vet-Ak. Hndl. 1852 106-8 (1852)—(vide Wlsm. Tr. Ent. Soc. Lond. 1891 100-1).

Type 3: *Machimia tentoriferella* Clms. (Clms. 1860).

MACHIMIA Clms. Pr. Ac. Nat-Sc. Phil. 12 211-12 (1860): Clms-Stn. Tin. N-Am. pp. ix, 147-9 sp. 1 (1872); Z. Verh. ZB. Ges. Wien 23:1873 239 (1873). CRYPTOLECHIA Z. (Abth. 2. MACHIMIA Clms.) Z. Hor. Soc. Ent. Ross. 13 258, 259 sp. 6-23, 263 sp. 3 (1877); Chmb. Bull. US. GG. BIOL. CENTR.-AMER., Heter., Vol. IV., May 1912.

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Surv. 4 156 (1878). *MACHIMIA* Btlr. Tr. Ent. Soc. Lond. 1883 50 (1883); Wlsm. US. Dp. Agr. (Div. Ent.) Ins. Life 2 150-1 (1889); Riley, Smith's List Lp. Bor-Am. 98 sp. 5225-6 (1891); Dyar Bull. US. Nat. Mus. 52 520 sp. 5853 (1902); Krft. Smith's Check List Lp. Bor-Am. 113 sp. 6396 (1903).

When discussing the relationship of "*Cryptolechia* Z. and its allies" [Ins. Life 2 150-1 (1889)] *Psilocorsis* Clms. was sunk as a synonym of *Cryptolechia* Z., from which *Machimia* Clms. was separated thus:

$$\begin{cases} \text{FW: 2-3 adjacent at origin} = \textit{Cryptolechia} \text{ Z. } (\textit{Psilocorsis} \text{ Clms.}). \\ \text{FW: 2-3 remote at origin} = \textit{Machimia} \text{ Clms.} \end{cases}$$

This method of distinguishing *Psilocorsis* from *Machimia* was indicated by Clemens [Pr. Ac. Nat-Sc. Phil. 12 211-3 (1860)], who also found points of distinction in the form of the palpi and the vestiture of the head. The characters hitherto relied on still hold good as between *Psilocorsis* (*quercicella* Clms.) and *Machimia* (*tentoriferella* Clms.), but *Cryptolechia* (*straminella* Z.) differs from *Psilocorsis* and agrees with *Machimia* in that FW: 2 is distinctly more remote from 3 than 3 is from 4, while in *Psilocorsis* FW: 2, 3, 4 are nearly equidistant at origin, or 2 tends to become nearer to 3 than 3 is to 4, and the palpi differ in the median joint being "rather flattened, smooth, with appressed scales" which slightly overlap and form a narrow furrow along the outer edge.

### 1. *Cryptolechia peperita*, sp. n. (Tab. IV. fig. 9.)

*Antennae* pale brownish cinereous. *Palpi* creamy whitish, the median joint shaded externally to beyond the middle with brownish fuscous. *Head* creamy white. *Thorax* brownish creamy. *Forewings* with the costa evenly arched, apex obtuse, termen obliquely convex; creamy whitish above the fold, blending to brownish creamy and very pale fawn-brownish outwardly and dorsally, speckled throughout, but especially beyond the cell, with abruptly square-ended brownish scale-points; a diffused, transverse, small smoky fuscous patch lies at the end of the cell; a less conspicuous one, a little beyond the middle of the cell, being diffused and widened upward to the costa, where it merges in a narrow shade of fawn-brownish extending to base and apex, a series of brownish fuscous dots lying around the termen; an outwardly curved transverse shade somewhat beyond the cell and a slight cloud beyond the middle of the fold are scarcely darker than the brownish creamy surrounding the wing; cilia brownish creamy, becoming darker around the apex: underside smoky fuscous, with a terminal series of fuscous dots at the ends of the veins. *Exp. al.* 25 mm. *Hindwings* and cilia shining, very pale brownish cinereous, sparsely and inconspicuously speckled with single scales of a darker hue; underside paler than the forewings, with a terminal series of fuscous dots at the ends of the veins, the costal and terminal areas somewhat speckled. *Abdomen* and *Leys* pale brownish ochreous, the latter shaded externally with greyish fuscous.

*Type* ♂ (67065) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879 (*G. C. Champion*). Unique.

Perhaps most nearly allied to 5843 *tentoriferella* Clms.

### 2. *Cryptolechia dolopis*, sp. n.

*Antennae* ♂ biciliate 3; dusky cinereous. *Palpi* white, the median joint smoky fuscous on its basal half. *Head* chalk-white. *Thorax* smoky white. *Forewings* with the costa slightly arched towards the base,

widening outwardly, the apex depressed, obtuse; smoky white, through minute fuscous dusting on a white ground; at the base of the wing is a narrow fuscous costal line; a smoky fuscous discal spot at one-third, with a spot in the fold below and beyond it, is followed by a larger ill-defined spot at the end of the cell; straight below this is another plical spot, diffused downward to the dorsum and forming the lower extremity of a series of smoky fuscous spots, which, running parallel with the termen, form an angle pointing to the apex and revert to the costa at about two-thirds; cilia chalk-whitish, peppered, especially along their middle, with smoky fuscous. *Exp. al.* 15–17 mm. *Hindwings* rather shining, whitish cinereous; cilia white, becoming yellowish white along their base. *Abdomen* smoky whitish. *Legs* smoky whitish.

*Type* ♂ (66101); ♀ (66105) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66106–8) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Eight specimens.

### 3. *Cryptolechia caduca*, sp. n. (Tab. IV. fig. 10.)

*Antennae* ♂ biciliate 1; straw-ochreous, very faintly barred with tawny above. *Palpi* straw-ochreous, with a tawny tinge on the outer side of the basal half of the median joint; terminal joint shorter than median. *Head* straw-ochreous. *Thorax* straw-ochreous. *Forewings* tawny vinous, their purplish gloss modified only by a sparse distribution of smoky blackish scales which are concentrated in two discal spots, one at the end of the cell, the other half-way between this and the base, and in an outwardly bowed line on the outer fourth of the wing, parallel to the apex and termen—this line is but faintly indicated; at the extreme base, but not reaching to the costa, is a small, pale straw-ochreous patch, the extreme edge of the costa is also slightly tinged with ochreous; cilia cinereous, dusted with smoky fuscous spots around the margin at their base. *Exp. al.* 24 mm. *Hindwings* and cilia shining, pale brownish cinereous. *Abdomen* ochreous. *Legs* ochreous, much smeared with tawny fuscous.

*Type* ♂ (65899) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65900) US. Nat. Mus.]

*Hab.* GUATEMALA: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Two specimens.

### 4. *Cryptolechia hydara*, sp. n. (Tab. IV. fig. 11.)

*Antennae* ♂ biciliate  $\frac{1}{2}$ , slightly serrate; fawn-ochreous. *Palpi* somewhat slender, recurved, reaching considerably above the vertex; pale fawn-ochreous, the median joint dark brown to two-thirds from its base; terminal joint shorter and somewhat more slender than the median, dark brown at its extreme apex. *Head* and *Thorax* fawn-ochreous. *Forewings* broad, slightly narrowed towards the base, costa arched towards the base and slightly bulged beyond the middle, apex bluntly angular, termen oblique; pale fawn-ochreous, blotched and sprinkled with dark brown; a dark brown spot at the extreme base of the costa is followed by a dark brown costal patch before the middle, with another below and a little before it; beyond the middle are about five small dark costal spots along the base of the fawn-ochreous cilia, and from the first, second, and last of these the sprinkling of dark brown tends to form broken lines of scale-spots, somewhat parallel with the apex and termen, there is also a group of similar scales at the end of the cell; terminal cilia slightly paler than the costal, with a brownish shade along their base. *Exp. al.* 20 mm. *Hindwings* and cilia shining, whitish ochreous. *Abdomen* and *Legs* pale fawn-ochreous.

*Type* ♂ (65901) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Unique.

### 5. *Cryptolechia epidesma*, sp. n. (Tab. IV. fig. 12.)

*Antennae* tawny testaceous, diluted to whitish ochreous on their outer third. *Palpi* smooth, recurved, the terminal joint shorter than the median; whitish ochreous. *Head* whitish ochreous. *Thorax* tawny

testaceous, the base of the tegulae whitish ochreous. *Forewings* tawny testaceous, shining with a vinous gloss, the costa and termen narrowly pale straw-ochreous, the costal line somewhat widened at the base; a faint indication of a shade-spot at the end of the cell; cilia pale straw-ochreous. *Exp. al.* 14 mm. *Hindwings* pale yellowish brown; cilia brownish cinereous. *Abdomen* brownish cinereous. *Legs* pale cinereous.

*Type* ♀ (65902) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

This species can be easily recognised by its pale costa and cilia contrasting with the dark forewings.

### 6. *Cryptolechia erythema*, sp. n. (Tab. IV. fig. 13.)

*Antennae* whitish ochreous, sprinkled with fuscous above; basal joint rosy ochreous. *Palpi* rosy ochraceous, the median joint with a greyish brown shade externally on its basal half. *Head* and *Thorax* rosy ochraceous. *Forewings* rosy, with an ochreous tinge towards the base in some lights, the colour becoming more strongly pink, narrowly along the costa and more widely around the termen; the extreme edge of the costa is ochreous, with a black spot at the base; a smoky black spot lies in the middle of the fold, another on the cell above and before it, and at the end of the cell is a stronger black spot surrounded by a smoky fuscous suffusion extending downward, and obliquely upward toward the apex; a line of smoky blackish scales, tending obliquely outward from the costa, forms an angle on vein 7, reverting parallel with the termen to the dorsum before the tornus; cilia rosy ochraceous, with a fuscous line along their base; underside carmine, ochreous on the costa and towards the dorsum. *Exp. al.* 20-22 mm. *Hindwings* yellowish ochreous, with a strong rosy tint about the apex, extending through the yellowish ochreous cilia; underside ochreous, becoming rosy carmine about the apex. *Abdomen* pale ochreous. *Legs* whitish ochreous; the anterior and median pairs suffused with dark fuscous.

*Type* ♀ (65903, *Rio Maria Linda*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—GUATEMALA: Rio Maria Linda, 500 ft., III. 1881 (*G. C. Champion*). South America—BRAZIL: PARA: Para, 17. II. 1893 (*A. Schulz*). Two specimens.

### 7. *Cryptolechia ancorata*, sp. n. (Tab. IV. fig. 14.)

*Antennae* pale ochreous, smeared with reddish towards the base. *Palpi* long, slender, recurved to the front of the thorax; rosy brownish on the long median joint, distinctly tinged with red above on the shorter terminal joint. *Head* and *Thorax* brownish flesh-colour. *Forewings* brownish flesh-colour, narrowly margined with dark tawny reddish, except on the outer two-thirds of the dorsum; a diffused, triangular patch of this colour on the costa at one-third, pointing directly downward, terminates in a dark transverse spot at the outer extremity of the cell, forming part of a very oblique narrow band arising on the costa in a second triangular patch and running back to the dorsum at one-third from the base; from this band a narrower line of the same colour, leaving the apex of the costal triangle, is bowed outward running parallel to the costa, termen, and tornus, until it reaches the dorsum at about three-fourths from the base; cilia dark tawny reddish; underside rich rosy. *Exp. al.* 26 mm. *Hindwings* pale straw-ochreous, with a rich rosy tinge beyond the middle; cilia shining, pale straw-ochreous, rosy around the apex; underside pale straw-ochreous. *Abdomen* shining, pale straw-ochreous; whitish beneath. *Legs* shining, pale straw-ochreous.

*Type* ♀ (3284 Wlsm. Det. 1898) Mus. J. de Joannis.

*Hab.* COSTA RICA.

This very distinct species is unique in the collection of M. l'Abbé J. de Joannis.



### 8. *Cryptolechia crossota*, sp. n.

*Antennae* pink at the base, blending to olivaceous grey outwardly. *Palpi* overarching the vertex; flesh-coloured, sprinkled with reddish fuscous scales on their outer sides. *Head* and *Thorax* ochreous. *Forewings* with the costa evenly and considerably arched, apex obtusely rounded, termen not oblique, tornus rounded; ochreous, with a rosy flesh-like tinge, which becomes very narrowly rich salmon-red along the costa and termen in the ♂, but a shade darker, or more purplish in the ♀, fading out toward the base; a slender purplish line, leaving the costa at three-fourths from the base, curves outward, running roughly parallel to the termen and reverting, with a slight bend on the fold, to the dorsum before the tornus; a few scales of the same colour form an indistinct cloud across the end of the cell, and a minute fuscous dot occurs on the middle of the cell in the ♀, at a little less than one-third from the base; a black spot lies at the base of the costa; terminal cilia salmon-red, strongly tipped with purple; underside rosy flesh-colour, deepening toward the costa and termen. *Exp. al.* 24–27 mm. *Hindwings* bright yellowish ochreous, tinged with rosy flesh-colour toward the apex; cilia yellow-ochreous, also strongly tinged with rosy flesh-colour at apex and termen. *Abdomen* and *Legs* yellowish ochreous.

*Type* ♀ (65919, *La Tinta*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (5852 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Santa Rosa, VIII. 1906 (*W. Schaus*) — GUATEMALA: VERA PAZ: La Tinta, Polochic Valley, 16. XI. 1879 (*G. C. Champion*). Two specimens.

Very closely allied to *flava* Z., but distinguishable by the more conical projecting tuft of scales on the head, and by the absence of the dark purplish line at the base of the cilia on the forewings.

### 9. *Cryptolechia? rhodosarca*, sp. n. (Tab. IV. fig. 15.)

*Antennae* yellow, tinged with rosy red towards the base. *Palpi* somewhat slender, recurved, terminal joint half as long as the median; rosy red, speckled with yellow, the terminal joint banded and tipped with yellow. *Head* and *Thorax* yellowish, mixed with rosy red. *Forewings* broadly ovate, with the costa much arched, apex rounded, termen convex; bright rosy red, much reticulated at the base and towards the apex with bright golden yellow, which forms a series of about eight subterminal spots around the apex; a bright rosy purple suffusion covering the dorsum, except its basal fourth, extends upward across the cell nearly to the costa, its inner edge being marked on the cell by a round silvery white spot, a small white dot lying at its outer edge on the end of the cell—this suffusion is not clearly defined, but blends with the ground-colour towards the termen; cilia golden yellow, with some rosy red near the tornus; underside rich rosy pink. *Exp. al.* 18 mm. *Hindwings* rosy pink; cilia yellowish, with rosy pink suffusion; underside rich rosy pink. *Abdomen* rosy pink. *Legs* pale yellowish, with rosy pink shades externally on the tibiae.

*Type* ♀ (65904) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Senahu, 2800 ft., XI. 1879 (*G. C. Champion*). Unique.

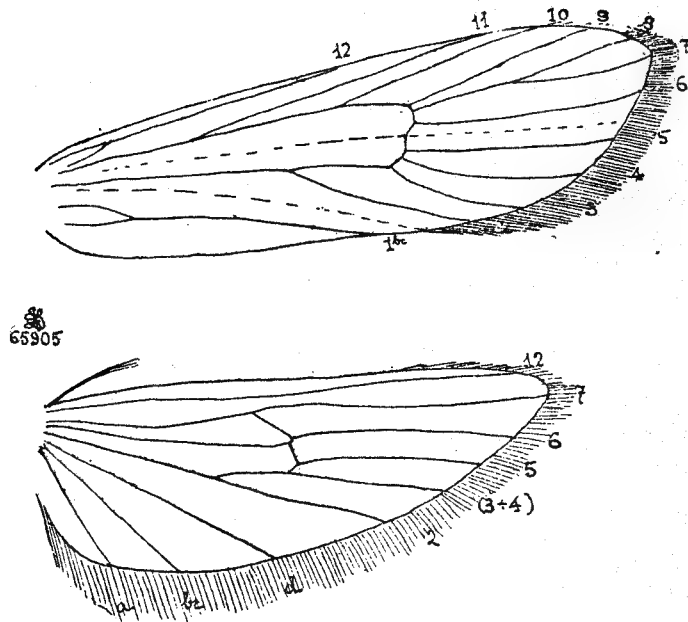
This species is slightly aberrant in FW: 11 arising nearer to the base than is usual, but not so near as in *Teratomorpha* Wlsm.; the apex of the forewing is also more than usually rounded, and HW: 3–4 are slightly separate, not connate.

## MNESICHARA, gen. n.

(μνησιχάρη=gaiety.)

Type: *Mnesichara dictyota* Wlsm. (Tab. IV. fig. 16.)

J. H. Durrant, del.

28. *Mnesichara dictyota* Wlsm. ♀.

*Antennae* long (1, or nearly), ciliate; basal joint enlarged, with pecten. *Labial Palpi* long, recurved, terminal joint scarcely shorter than median; median joint with appressed scales, slightly projecting towards apex. *Maxillary Palpi* distinct. *Haustellum* scaled. *Head* smooth, clothed with rather long scales above. *Thorax* smooth. *Forewings* elongate, narrow at the base, slightly widening outward, costa moderately straight, apex depressed, somewhat obtuse, termen oblique, tornus rounded: *neuration* 12 veins; 7-8 stalked, 7 to apex (or slightly below); rest separate, 2 remote from angle of cell, 3 from angle; 1 basally furcate. *Hindwings* 1+, costa straightened, apex slightly rounded, termen very oblique, convex, evenly rounded with the dorsum: *neuration* 7 veins, 3-4 coincident; 5 approximated to (3+4); 6 and 7 parallel. *Abdomen* somewhat flattened. *Legs*: hind tibiae with hair-scales above and beneath.

Allied to *Carcina* Hb. and *Filinota* Busck, and agreeing with both in the tendency to long antennae and bright colouration; agreeing also with *Filinota* in the coincidence of HW: 3-4, but differing from both in FW: 3-4 being separate, not stalked. *Endrosis* Hb. is perhaps another ally.

1. *Mnesichara dictyota*, sp. n. (Tab. IV. fig. 16.)

*Antennae* bright ochreous, tinged with reddish towards the base, with a broad yellowish brown band before the apex. *Palpi* pale yellow, with a slender, longitudinal, rosy line along the middle of the median joint externally. *Head* and *Thorax* pale yellow, mottled and streaked with red; the tegulae edged with dark brown on their outer sides. *Forewings* bright yellow, streaked throughout longitudinally and obliquely with bright rosy red, narrowly margined around the apex and termen with yellowish brown, which is continued along the costa to the middle, thence expanding and diverging obliquely to the dorsum at one-fourth, along which it is produced to the base; in crossing the cell this band is somewhat dilated into the form of a quadrate patch, resting on the middle of the fold and sending off a short branch from its inner and upper angle to the costa at one-third, where it is somewhat dilated, but

does not reach the base; a small kidney-shaped ocellate patch of yellowish brown lies at the end of the cell, emitting a short branch to the tornus, and a small tooth-shaped projection is emitted from the dark costal shade at the commencement of the costal cilia; cilia yellowish, with a slight rosy tinge, becoming brownish grey at the apex and tornus; underside rosy pink. *Exp. al.* 24 mm. *Hindwings* yellowish white, with a slightly iridescent pinkish glow; cilia very pale yellowish. *Abdomen* yellowish white. *Legs* yellowish white, the posterior pair with two spots on the tarsi externally; the anterior pair with the tibiae pink and the first tarsal joint brown.

*Type* ♀ (65905, *Cerro Zunil*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65906) US. Nat. Mus.]

*Hab.* GUATEMALA: Cerro Zunil, 4000–5000 ft., VIII–IX. 1880 (*G. C. Champion*); Volcan de Atitlan, 2500–3500 ft., XII. 1880 (*G. C. Champion*). Two specimens.

## 2. *Mnesichara picticollis*, sp. n. (Tab. IV. fig. 17.)

*Antennae* blackish, delicately spotted above, and at the sides on each joint, with whitish ochreous. *Palpi* yellowish brown, the terminal joint bright ochreous, with two dark fuscous bands, one before the middle, the other before the apex. *Head* cream-white. *Thorax* purplish fuscous, the tegulae slightly paler purplish, a band across the front forming a straight cream-white collar, of which the anterior edge is narrowly bright vermilion. *Forewings* yellowish brown, minutely sprinkled with whitish ochreous scales, especially towards the apex; along and below the fold, from near the base, is a slight carmine suffusion, and before the middle of the wing a broad reddish ochreous patch, commencing on the costa, is attenuate on the cell, somewhat expanding again to its termination on the fold, its sinuate inner margin well defined throughout; cilia yellowish brown, a slender palish line along their base. *Exp. al.* 19 mm. *Hindwings* and cilia yellowish grey. *Abdomen* yellowish brown. *Legs* yellowish brown, with a purple band around the base of the hind tibiae.

*Type* ♂ (65908); ♀ (65907) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Two specimens.

## TERATOMORPHA, gen. n.

(*Teras* Tr., nom. gen.; *μορφή* = shape.)

*Type*: *Teratomorpha albifrons* Wlsm. (Tab. IV. fig. 18.)

*Antennae* -1, slightly serrate; basal joint without pecten. *Labial Palpi* slender, recurved, reaching to vertex; median joint slightly thickened with loose scales; terminal joint shorter than median, acute. *Maxillary Palpi* distinct. *Haustellum* scaled. *Ocelli* absent. *Head* smooth, with long hair-scales at sides. *Thorax* smooth. *Forewings* with costa arched towards base, slightly depressed in middle, apex obtusely pointed, termen somewhat oblique, tornus rounded: *neuration* 12 veins; 7–8 stalked, 7 to termen slightly below apex; 2 twice as remote from 3 as 3 is from 4; 11 arising midway between 10 and base; 1 basally furcate. *Hindwings* 1, costa more or less excavate before apex; termen oblique, dorsum evenly rounded: *neuration* 8 veins; 6–7 separate and parallel; 3–4 connate; 5 parallel to 4. *Abdomen* somewhat depressed. *Legs*: hind tibiae loosely clothed.

Differs from *Cryptolechia* Z. in the weaker palpi, in the peculiar form of the wings, and in the earlier origin of FW: 11, and from *Gonionota* Z. in its shorter palpi with smooth terminal joint.

## 1. *Teratomorpha albifrons*, sp. n. (Tab. IV. fig. 18.)

*Antennae* pale ochreous. *Palpi* yellowish white. *Head* white. *Thorax* reddish fawn-grey, *Forewings* reddish fawn-grey, sparsely sprinkled with tawny fuscous scales on the outer third, tending to run parallel with the termen; with two tawny fuscous dots, one on the middle of the cell, the other at its outer

extremity; a small group of raised tawny fuscous scales before the middle of the costa and two on the fold, one before, and one beyond its middle, with a small patch of slightly raised scales on the flexus. *Exp. al.* 15–20 mm. *Hindwings* reddish grey, darker at the apex; cilia the same, with a strong rosy tinge towards the apex. *Abdomen* reddish grey; anal tuft yellowish white. *Legs* yellowish white.

*Type* ♂ (65926, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65928, 65930–1, 65933) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: *Teapa*, III. (*H. H. Smith*)—GUATEMALA: San Isidro, 1600 ft. (*G. C. Champion*); Cerro Zunil, 4000–5000 ft. (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–6000 ft. (*G. C. Champion*). Ten specimens.

## 2. *Teratomorpha producta*, sp. n. (Tab. IV. fig. 19.)

*Antennae* whitish ochreous. *Palpi* slightly recurved to the vertex, somewhat divergent, smooth, the terminal joint scarcely more than half the length of the median; whitish ochreous. *Head* and face smooth; whitish ochreous. *Thorax* slightly clouded with pale fawn-colour. *Forewings* somewhat broad, the costa with an abruptly projecting angle a little before the middle, bearing rough cilia, the apex angular, termen somewhat oblique; pale fawn-ochreous, tinged with flesh-colour, with a sprinkling of greyish fuscous scales, grouped in a reduplicated curved series commencing at the middle of the costa and terminating in a somewhat darker group on the dorsum before the tornus; a single small fuscous spot lies on the cell at one-third from the base; cilia fawn-ochreous, tinged with greyish fuscous, of which a small spot also occurs in them at the extreme apex. *Exp. al.* 20 mm. *Hindwings* whitish ochreous; the cilia becoming tinged with flesh-colour towards the apex. *Abdomen* fawn-ochreous. *Legs* whitish ochreous.

*Type* ♂ (65920) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65921) US. Nat. Mus.]

*Hab.* GUATEMALA: Volcan de Atitlan, 2500–3500 ft. (*G. C. Champion*). Two specimens.

In the second specimen of this species, from the same locality, the fleshy tint gives way to a smoky suffusion which almost obliterates the curved lines of greyish fuscous scale-groups—this extends over the outer two-thirds of the wing, including the cilia.

## GONIONOTA Z.

*Type*: *Hypercallia* (*Gonionota*) *notodontella* Z. (Z. 1877).

HYPERCALLIA Stph. (*GONIONOTA* Z.) Z. Hor. Soc. Ent. Ross. 13 379, 381–2 Pf. 5·132<sup>a-b</sup> (1877).

GONIONOTA Meyr. Tr. Ent. Soc. Lond. 1883 125–6 (1883): 1909 24–8 (1909).

[nec \**GONIONOTA* Meyr. Pr. Lin. Soc. NSW. 11 (2 s. I: 1886) 1041 (1886) = *SCORPIOPSIS* Trnr. (Type: *pyrobola* Meyr.).]

[Meyrick (Tr. Ent. Soc. Lond. 1909 24–5) when redescribing this genus states that he is “informed by Mr. Busck that the typical species of *Gonionota*, *G. notodontella*, Zell., has vein 9 of fore-wings rising from stalk of 7 and 8.” Some error has occurred here—the neuration of the Type of *Gonionota notodontella* Z. is: FW: 12 veins; 7–8 stalked, 7 to termen; 9 and other veins separate; 2 twice as remote from 3 as 3 is from 4. HW: 8 veins; 3–4 connate; 5–7 parallel.—Drnt.]

### 1. *Gonionota cnephaea*, sp. n. (Tab. IV. fig. 26.)

*Antennae* biciliate 1, slightly serrate; brownish ochreous. *Palpi* long, projecting, slightly recurved; dark tawny, paler on their inner sides. *Head* fawn-grey. *Thorax* with a strong tuft; fawn-grey, shaded with dark tawny posteriorly; tegulae tawny. *Forewings* with the costa much arched before the middle, apex obtuse, termen convex; dark tawny, with a yellowish white streak along the outer half of the costa, blending to yellowish ochreous at its lower edge, this colour gradually losing itself in the tawny wing-surface toward the end of the cell; on the lower two-thirds of the termen some fawn-grey occurs between the tawny lines which mark the veins, extending inward nearly as far as the cell; cilia dark fawn-grey, with a pale line along their base. *Exp. al.* 19 mm. *Hindwings* and cilia dark fawn-grey, a pale line along the base of the latter. *Abdomen* greyish fuscous above, whitish beneath. *Legs* bone-whitish, the anterior pair with chestnut-brown streaks on tibiae and first tarsal joint.

*Type* ♂ (65912) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.** [*PT.* (65913) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Two specimens.

### 2. *Gonionota melobaphes*, sp. n. (Tab. IV. fig. 27.)

*Antennae* biciliate 1; reddish ochreous, shaded with brown towards the apex. *Palpi* long, erect, slightly curved, the median joint scimitar-shaped, terminal joint tufted above nearly to its apex; reddish brown, mixed with yellow, the tufts above the joints yellow. *Head* bright yellow, mixed with rosy red. *Thorax* strongly tufted; bright yellow, much mixed with rosy red, the tuft tipped with dark tawny brown. *Forewings* much arched before the middle, apex obtusely rectangular, termen slightly convex, tornus rounded; for the most part tawny brown, with darker and paler shades, approaching tawny fuscous, on and below the middle of the fold and a little before the apex, and fawn-brown toward the termen; a broad patch of yellow, suffused with reddish ochreous and slightly speckled with brown scales, extends from the base to one-sixth of the wing-length along the dorsum, to one-half along the costa, and to the end of the cell below it, being somewhat arched and partially interrupted before the middle of the wing; towards the apex the extreme costa is narrowly white; cilia dark brownish fuscous, tipped with white below the apex. *Exp. al.* 18–22 mm. *Hindwings* pale yellowish brown; cilia shining, bone-greyish. *Abdomen* tawny fuscous above, whitish beneath. *Legs* shining bone-white; the anterior pair reddish brown externally on the tibiae and first tarsal joint.

*Type* ♂ (65914, *Chiriqui*) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.** [*PT.* (6444) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—COSTA RICA: Tuis, 2400 ft., 1908 (*W. Schaus*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). South America—VENEZUELA: Aroa (*W. Schaus*)—FRENCH GUIANA: St. Laurent, Rio Maroni, 16–30. XI. 1906 (*E. Le Moult*)—BRAZIL: PARANA: Castro, 1898 (*E. D. Jones*). Ten specimens.

### 3. *Gonionota cristata*, sp. n.

*Antennae* reddish ochreous at the base, fading to brownish cinereous beyond the basal third. *Palpi* dark reddish ochreous, sprinkled with brownish on their outer sides, the apex of the short terminal joint pale ochreous. *Head* and *Thorax* reddish ochreous, mixed with some paler ochreous scales, and dusted with brownish, especially at the apex of the strong crest-like posterior tuft. *Forewings* with the costa much arched before the middle, not excavate beyond; rich reddish ochreous at the base, very dark brownish beyond, the basal third with some admixture of ochreous and dark fuscous scaling; a curved line of dark scales marks the not-very-clearly-defined, outwardly-bowed edge of the bright basal patch, in the middle of which a shorter line of similar scales crosses the fold, others lying along the line of the fold itself; commencing a little before the outer fourth of the costa is a line of white scale-spots, tending at first very obliquely outward, but bent down parallel to the termen from a point opposite to the apex;



there is also a minute white spot at the end of the cell; cilia brownish fuscous. *Exp. al.* 17 mm. *Hindwings* dark brownish fuscous; a shade-line running through the scarcely paler cilia. *Abdomen* brownish fuscous, anal tuft paler. *Legs* pale cinereous.

*Type* ♂ (65917) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65918) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft. (*G. C. Champion*).  
Two specimens.

The species is extremely similar to *rhacina* Wlsm., from which it differs in the darker colouring, and especially in the much darker hindwings; in size it is a little smaller, but it is of course easily distinguished by its unincised costa.

#### 4. *Gonionota phlebodes*, sp. n. (Tab. IV. fig. 28.)

*Antennae* whitish, shaded at the base with reddish ferruginous. *Palpi* pale straw-yellow on their inner side, shaded externally with fawn-brown along the median joint, and across the middle of the terminal joint. *Head* pale straw-yellow, mixed with some reddish ferruginous scales. *Thorax* yellow, shaded and smeared with reddish ferruginous. *Forewings*, with the costa much arched, rectangular at the apex, the termen not oblique; yellow, with fawn-brown blotches and bright reddish ferruginous streaks; an elongate fawn-brown blotch occupies the base of the costa above the cell, extending to one-third, with some reddish ferruginous scales intermixed; a second fawn-brown blotch occupies the middle of the costa, descending to the lower edge of the cell, where, at its inner angle, is a black spot, a second black spot lying at the end of the cell a little beyond its outer angle; a dorsal blotch of the same colour, at one-third from the base, is attenuated upwards to the fold, near the first black spot; a third fawn-brown shade occurs along the outer third of the costa, produced through the terminal cilia and connected with a narrow fawn-brown terminal band which shades the pale yellow cilia with brown toward the tornus; an irregular curved line of scattered blackish scales runs parallel to the margin of the wing, from the fold to vein 10, half-way between the cell and the margin; the whole of the bright yellow intermediate space between the somewhat ill-defined brown blotches is mottled with rich reddish ferruginous, each vein being distinctly marked by a line of that colour; underside spotted along their outer margins with brownish fuscous between the veins. *Exp. al.* 19 mm. *Hindwings* and cilia greyish white; underside spotted along their outer margins with brownish fuscous between the veins. *Abdomen* grey. *Legs* reddish grey.

*Type* ♂ (65915) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Cerro Zunil, 4000-5000 ft. (*G. C. Champion*). Unique.

#### 5. *Gonionota rhacina*, sp. n. (Tab. IV. fig. 29.)

*Antennae* reddish fawn. *Palpi* erect, somewhat recurved, median joint scimitar-shaped, terminal joint not more than half as long as the median, clothed above nearly to the apex; reddish fawn. *Head* reddish fawn-colour, a projecting tuft in front. *Thorax* reddish fawn. *Forewings* tawny reddish brown, with a reddish fawn patch at the base of the dorsum, extending to the upper edge of the cell as far as one-third from the base where it is narrowly produced to the costa, a group of separate blackish scales lying at its outer edge on the cell; beyond the middle the costa is deeply sinuate, the depressed portion narrowly white; cilia greyish. *Exp. al.* 20 mm. *Hindwings* reddish grey; cilia greyish. *Abdomen* reddish grey. *Legs* greyish.

*Type* ♂ (65916) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Senahu, 2800 ft., 17-23. XI. 1879 (*G. C. Champion*).  
Unique.

## PELEOPODA Z.

Type: *Peleopoda lobitarsis* Z. (Z. 1877).

PELEOPODA Z. Hor. Soc. Ent. Ross. **13** 379, 385–7 Pf. 5·134<sup>a-c</sup> (1877); Meyr. Tr. Ent. Soc. Lond. **1883** 124 (1883); Busck Pr. US. Nat. Mus. **40** 208–10 Pf. 8·15–17 (1911).

1. *Peleopoda lobitarsis* Z.

*Peleopoda lobitarsis* Z. Hor. Soc. Ent. Ross. **13** 386–7 Pf. 5·134<sup>a-c</sup> (1877)<sup>1</sup>.

Type ♂ Mus. Stgr.

Hab. PANAMA: CHIRIQUI (*Ribbe*)<sup>1</sup>.

## HYPHYPENA Wrn.

Type: *Hyphypena bipunctalis* Wrn. (Wrn. 1889).

HYPHYPENA Wrn. Tr. Ent. Soc. Lond. **1889** 231–2 (1889).

*Antennae* biciliate; basal joint without pecten. *Labial Palpi* projecting nearly three times the length of the head, laterally compressed; terminal joint tufted above, less than half the length of the median; median joint somewhat roughened toward end. *Maxillary Palpi* short. *Haustellum* scaled. *Head* with densely appressed hair-scales, projecting in front. *Thorax* smooth. *Forewings* with the costa somewhat arched, sinuate beneath apex, tornus rounded: *neuration* 12 veins; 9 out of stalk of 7–8, 7 to termen; 3–5 approximate; 2 twice as remote from 3 as 3 is from 4; 1 basally furcate. *Hindwings* 1, apex somewhat depressed, rounded, tornus rounded: *neuration* 8 veins; 3–4 stalked; 5–7 parallel. *Abdomen* somewhat flattened. *Legs*: hind tibiae with rough hairs above.

Closely allied to *Coptotelia* Z., but differing in FW: 9 arising from stalk of 7–8, instead of being closely approximate—further study may render it advisable to unite these two genera.

1. *Hyphypena syntoma*, sp. n. (Tab. IV. fig. 21.)

*Antennae* stramineous. *Palpi* reddish brown, the base and apex of the terminal joint pale yellowish. *Head* canary-yellow, mixed with vermilion. *Thorax* yellow, mottled with vermilion-red, especially on the anterior halves of the tegulae. *Forewings* canary-yellow, mottled with vermilion, especially about the base, along the cell, and on the lines of the veins beyond the end of the cell; the costa and termen are narrowly tawny brownish, an indistinct outwardly curved subterminal fascia of the same colour, from the outer third of the costa, not quite reaching the tornus; there is a small tawny brownish spot at the end of the cell, and another on the dorsum near the flexus containing some raised scales; cilia pale yellow. *Exp. al.* 13 mm. *Hindwings* shining, semitransparent, pale golden yellowish. *Abdomen* pale yellowish. *Legs* yellowish white.

Type ♂ (5853 Wlsm. Det. 1908) US. Nat. Mus.

Hab. PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

This species must be very similar to *Peleopoda lobitarsis* Z., but the hind legs do not agree with the description of that species.

2. *Hyphypena colpodes*, sp. n. (Tab. IV. fig. 20.)

*Antennae* biciliate  $\frac{1}{2}$ ; fawn-brown, slightly serrate towards apex. *Palpi* long, curved; yellowish, profusely speckled with fawn-brown and red scales, the terminal joint half the length of the median,

somewhat thickly clothed above nearly to its apex. *Head* yellowish, profusely sprinkled with red. *Thorax* fawn-brown, suffused with red along the centre. *Forewings*, with the costa somewhat arched, the termen deeply sinuate below the apex, and almost angulate at its middle, tornus rounded; dark fawn-brown, with rich reddish patches mixed with pale yellow, and two transparent spots on the cell almost white; the red suffusion commences at the base of the dorsum, extending widely along it and narrowly upward to the costa, where it ends in a white marginal spot preceded by a yellowish spot below it, the first transparent spot on the cell lying also within its area at its outer edge; this reddish suffusion is scarcely and very indistinctly separated by fawn-brown from a larger red suffusion, occupying the whole central third of the dorsum and extending upward to the costa, where it ends in a white marginal spot at three-fourths from the base; this suffused portion, extending beyond the edge of the cell, contains at its inner edge, on the extremity of the cell, the second whitish transparent spot, it is also broken by three or four ill-defined yellow patches and by a large dark fuscous patch below and beyond the lower angle of the cell; cilia on their basal half fawn-brown, at the apex and projecting angles fawn-brown throughout, between these points whitish, on their outer half chequered with reddish ochreous; underside fawn-brownish, much mottled with bone-white, the costa profusely speckled with brown and white, the termen with white between the veins. *Exp. al.* 19 mm. *Hindwings* semitransparent, bone-whitish on their basal half, shaded with fawn-brown beyond, an elongate fuscous spot showing through from the underside at the outer end of the cell; cilia bone-whitish, with a fawn-brown shade running through them at their base; underside whitish, speckled with dark brown along the costa and on the outer third, a dark brownish fuscous spot at the end of the cell, and narrow brown shades between the veins. *Abdomen* pale fawn-brownish. *Legs* whitish, speckled with tawny reddish.

*Type* ♂ (65923, *V. de Chiriqui*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65924) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*); Bugaba, 800–1500 ft. (*G. C. Champion*). Two specimens.

### 3. *Hyphypena nigriplaga*, Dgn.

*Coptotelia nigriplaga* Dgn. Ann. Soc. Ent. Belg. 48 134 (1904)<sup>1</sup>.

*Hab.* AMERICA, C-S. Central America—COSTA RICA<sup>1</sup>: La Urruca, near San José<sup>1</sup>. South America—COLOMBIA<sup>1</sup>: CAUCA: Popayan<sup>1</sup>—ECUADOR<sup>1</sup>: LOJA: Zamora Valley, V. 1886<sup>1</sup>.

[Through the kindness of M. Paul Dognin I have been able to examine the Type of this species (♂ Popayan, 6559 Drnt. Det 1911): it agrees with *colpodes* Wlsm. in having FW: 9 out of the stalk of 7–8, and should therefore be referred to *Hyphypena*, rather than to *Coptotelia*. *H. colpodes* and *nigriplaga* are very closely allied, but the terminal joint of the palpi of *nigriplaga* is distinctly shorter than that of *colpodes*.—Drnt.]

### COPTOTELIA Z.

Type: *Coptotelia fenestrella* Z. (Z. 1863). (Tab. IV. fig. 24.)

COPTOTELIA Z. Stett. Ent. Ztg. 24 145–7 Pf. 2·7–7<sup>b</sup> (1863): Hor. Soc. Ent. Ross. 13 378 (1877); Meyr. Tr. Ent. Soc. Lond. 1911 700–4 (1912).

Closely allied to *Hyphypena* Wrn., both agreeing in wing-form and neuration, except that in *Hyphypena* FW: 9 arises from the stalk of 7–8, while in *Coptotelia* 9 is

closely approximate to 8 towards base—the thorax is smooth in both genera, without indication of a thoracic crest.

1. **Coptotelia fenestrella** Z. (Tab. IV. fig. 24.)

*Coptotelia fenestrella* Z. Stett. Ent. Ztg. 24 145–7 Pf. 2·7–7<sup>b</sup> (1863)<sup>1</sup>: Hor. Soc. Ent. Ross. 13 378 (1877)<sup>2</sup>.

*Hab.* AMERICA, C-S. Central America—COSTA RICA (13278, *J. de Joannis*)—PANAMA<sup>2</sup>: CHIRIQUI (*Ribbe*)<sup>2</sup>. South America—COLOMBIA: TOLIMA: Valparaiso, 4500 ft., IV. 1889 (*H. H. Smith*)—VENEZUELA<sup>1</sup>.

2. **Coptotelia gnorisma**, sp. n. (Tab. IV. fig. 25.)

*Antennae* pale fawn, reddish at the base. *Palpi* very long, the median joint scimitar-shaped, projecting, slightly recurved; ochreous, speckled with fuscous, and tinged with reddish orange toward its outer end; terminal joint short, erect, acutely triangular; reddish orange at its base, yellow at the apex. *Head* yellow, thickly clothed above, with triangular tuft of scales projecting forward. *Thorax* reddish ochreous. *Forewings* with the costa arched before the middle, slightly sinuate before the almost rectangular apex, termen slightly oblique, tornus well-defined; yellowish, much suffused with fawn-ochreous and reddish orange; a minute black dot on the cell, at one-third of the wing-length, in a spot of the yellow ground-colour, is followed by an oblique black spot at the end of the cell, an oblique dark fuscous dorsal shade, arising at one-fourth from the base, crosses the fold, and passes between the two black spots, blending with the fawn shading towards the costa, where a narrow dark fuscous shade occupies the middle of the margin between two equally narrow, elongate, white marginal spots, a third minute white spot occurring before the apex; termen somewhat shaded with fawn-brownish, extending to one-half the length of the cilia, which along the middle of the termen are pale yellowish on their outer half; cilia at the extreme apex fuscous, at the tornus grey, tipped with rosy pink; underside rosy pink, speckled with fawn-brown along the costa. *Exp. al.* 20–21 mm. *Hindwings* rich rosy grey, paler towards their base; cilia pale rosy pink; underside whitish ochreous, speckled with fawn-brown. *Abdomen* dull brownish ochreous. *Legs* whitish ochreous, speckled externally with fuscous; the anterior pair with a reddish line above.

*Type* ♀ (65909) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65911) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa (*Hoega*)—GUATEMALA: Cerro Zunil, 4000–5000 ft. (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Three specimens.

PHYTOMIMIA, gen. n.

(φυτόν = a plant; μίμια = imitation.)

*Type*: **Phytomimia chlorophylla** Wlsm. (Tab. IV. fig. 22.)

*Antennae* biciliate 1; basal joint without pecten. *Labial Palpi* porrect, divergent, three times the length of the head; median joint long and straight, with an obtusely triangular tuft of long scales above; terminal joint somewhat thickened, scarcely half the length of the median, semierect, smooth, pointed. *Maxillary Palpi* small, dependent. *Haustellum* scaled at base. *Head* thickly clothed with projecting scales above; face smooth. *Thorax* smooth. *Forewings* moderately broad, costa evenly arched, apex pointed, termen slightly sinuate: *neuration* 12 veins; 7–8 stalked, enclosing the apex; rest separate, 2 more remote from 3 than 3 is from 4. *Hindwings* 1, apex pointed, termen slightly sinuate, tornus rounded: *neuration* 8 veins; 5–7 parallel, 5 cubital; 3–4 connate. *Abdomen* somewhat depressed. *Legs*: hind tibiae hairy above.

*Phytomimia* may be distinguished from *Coptotelia* Z., *Hyphypena* Wrn., and *Gonionota* Z. by the absence of the projecting tuft of scales from the terminal joint of the palpi, while *Hypercallia* Stph. and *Pleurota* Hb. differ in the lower edge of the median joint being roughly clothed throughout.

### 1. *Phytomimia chlorophylla*, sp. n. (Tab. IV. fig. 22.)

*Antennae* bright green. *Palpi* bright green, becoming whitish along their lower edge, which, together with the whole terminal joint, is thickly sprinkled with reddish brown scales. *Head* pale green. *Haustellum* pale green. *Thorax* bright green. *Forewings* bright grass-green, the costa narrowly flesh-coloured throughout; a slender, oblique, flesh-coloured line before the termen crosses the veins, but does not reach the margins; a single dot of black scales on the disc at the end of the cell; cilia grass-green, with slightly darker basal and parting lines. *Exp. al.* 18 mm. *Hindwings* pearly white; cilia white. *Abdomen* bluish green; anal tuft white. *Legs*: posterior pair very pale green, the tarsal joints nearly white, touched beneath with brownish ochreous; anterior pair pale green, sometimes with a reddish line along the upper side of the tarsi.

*Type* ♂ (65938, *Panajachel*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65939) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Venta de Zopilote, 2800 ft., X. (*H. H. Smith*)—GUATEMALA: Panajachel, 5000 ft., 30. XII. 1880 (*G. C. Champion*). Two specimens.

### 2. *Phytomimia redundans*, sp. n. (Tab. IV. fig. 23.)

The description of *chlorophylla* applies in every particular to this species, except that this possesses a ferruginous brown ocelloid spot, narrowly rimmed with ochreous, on the dorsum beyond the middle, immediately preceding the oblique transverse line; while some few ochreous and brown scales are connected with the first discal spot. It is noticeable in the single female specimen before me that vein 2 of the forewings is a little further removed from 3 than in *chlorophylla*. I had at first suspected these to be sexes of the same species, but without more material, collected in one and the same locality, there could be no justification for uniting them. *Exp. al.* 18 mm.

*Type* ♀ (65937) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: San Joaquin, 3200 ft., 27.I – 1.II. 1880 (*G. C. Champion*). Unique.

## HYPERCALLIA Stph.

*Type*: *Phalaena citrinalis* Sep. (= *christiannana* L.; Stph. 1829).

HYPERCALLIA Stph. Cat. Br. Ins. 2 192 no. 286 sp. 7154 (1829): Nomencl. Br. Ins. 48 (1829): Ill. Br. Ent. Haust. 4 194–5, 400 no. 317 Pf. 38·2 (1834); Z. Isis 1839 191 (1839); Stn. Syst. Cat. Br. Tin-Pter. 12 (1849): Sppl. Cat. 20 (1851); HS. SB. Schm. Eur. 5 10, 38 no. 52 Pf. 3·40–1 (1853), 142 sp. 328 (1854); Stn. List Br. An. BM. 16 Lp. 93 no. 19 sp. 1 (1854): Ins. Br. Lp-Tin. 77, 152–3 no. 19 sp. 1 Pf. 5·4<sup>a-c</sup> (1854); Wkr. Cat. Lp. BM. 29 670–1 no. 32 sp. 1–2 (1864); Hnmn. Schm. Deutsch. Tin. 360–1 no. 458 sp. 551 (1870), Tbl. 7, 49 no. 458 (1876); Stgr-Wk. Cat. Lp. Eur. 305 no. 243 sp. 2216 (1871); F. & R. Reise Nov. Zool. Lp. 2 Pf. 138·56 (1875); Z. Hor. Soc. Ent. Ross. 13 379–85 Pf. 5·131–3 (1877); Wlsm. Tr. Ent. Soc. Lond. 1881 269–70, 287 Pf. 13·40 (1881); Btlr. Tr. Ent. Soc. Lond. 1883 50, 78 (1883); Meyr. Pr. Lin. Soc. NSW. 7 421 no. 40<sup>a</sup> (1883): 9 723 (1884): HB. Br. Lp. 612, 613–4 no. 2 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 175 no. 373 sp. 3322 (1901); Meyr. Tr. Roy. Soc. S-Austr. 26 141–2 (1902): Jr. Bomb. NH. Soc. 17 406–7 (1906): 20 145, 167 (1910): Ann. S-Afr. Mus. 5 355 (1909): Ann. Transv. Mus. 2 22 Pf. 7·6 (1910).



1. *Hypercallia arista*, sp. n. (Tab. IV. fig. 30.)

*Antennae* biciliate 1; dark brownish ochreous, basal joint yellow beneath. *Palpi* somewhat slender, scarcely recurved, the terminal joint nearly as long as the median; reddish brown, speckled with yellow. *Head* yellow, mottled with reddish brown. *Thorax* yellow, mottled with reddish ferruginous, a chestnut-brown spot in the middle. *Forewings*, with the costa slightly arched, apex a little depressed, termen slightly sinuate, tornus rounded; pale yellow, much mottled with bright reddish ferruginous, and clouded with chestnut-brown; this is most conspicuous in a broad fasciaform shade, commencing a little before the middle of the costa, extending outward to the costal cilia, narrowed downward to the cell, and thence bifurcate to the dorsum; the inner fork, more conspicuous than the outer, forming a brown dorsal patch at one-fourth from the base, the outer fork diffused toward the termen which is also shaded throughout with chestnut-brown; cilia pale yellow, chestnut-brown at the tornus; underside brownish, with a rosy red patch on their basal half. *Exp. al.* 16 mm. *Hindwings* 1; dark tawny brown, tending to brownish fuscous toward their apex; cilia brownish grey, with a paler patch below the apex; underside brownish yellow on their costal half toward the base. *Abdomen* reddish brown; yellowish white beneath. *Legs* yellow, tibiae obliquely streaked externally with rusty red.

*Type* ♂ (65925) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

## AGONOPTERYX Hb.

† *AGONOPTERYX* Hb. († *AGONOPTERYX* Stph.); = *PINARIS* Hb.; = *TICHONIA* Hb.; = *EPELEUSTIA* Hb. († *EPILEUSTIA* Stph.; = *HAEMYLLIS* Tr. († *HAEMILIS* Dp.); = \**VOLUCRA* (nec Ltr.) Z.; = *DEPRESSARIA* (p.) Hw., etc.

*Type 1*: *Pyralis ocellana* F. (Wlsm. 1908).

*AGONOPTERYX* Hb. († Stph.). = † *AGONOPTERYX* Hb. Verz. Schm. 410–11 sp. 3955–60 (1826). *DEPRESSARIA* Hw. (B. *AGONOPTERYX* Hb.) Stph. Ill. Br. Ent. Haust. 4 201–2 sp. 13–18 (1834): 421–2 no. 1204 sp. 3955–60 (1835). *AGONOPTERYX* Wlsm. Pr. Z. Soc. Lond. 1907 955–8 no. 31 sp. 59–62 Pf. 52·7–8 (1908); Busck Pr. US. Nat. Mus. 35 190, 198–200 no. 8 (1908).

[= *DEPRESSARIA* (Hw., p.) Wkr. Cat. Lp. BM. 28 552–61 no. 10 sp. 1–79 (1863): 35 1825–7 (1866); Stgr-Wk. Cat. Lp. Eur. 285–9 no. 191 sp. 1681–1786 (1871): Stgr-Rbl. Cat. Lp. Pal. 2 169–75 no. 369 sp. 3177–3313 (1901); Splr. Schm. Eur. 3 333–7 no. 6<sup>a</sup> sp. 1–71 Pf. 89·13–24 (1910). Clms-Stn. Tin. N-Am. pp. ix sp. 1–3, 137–8, 229–30, 244–5 (1872); Berg Bull. Soc. Imp. Nat. Mosc. 49 239–40 sp. 52 (1876); Z. Hor. Soc. Ent. Ross. 13 253–5 sp. 1 (1877); Chmb. Bull. US. GG. Surv. 4 83, 138 (1878); Wlsm. US. Dp. Agr. (Div. Ent.) Ins. Life 1 254–7 (1889); Riley, Smith's List Lp. Bor-Am. 99, sp. 5251–84 (1891); Stgr. Ergbn. Hamb. Magalh. Sammlr. Lp. 4 111 Pf. 1·27 (1899); Busck Pr. US. Nat. Mus. 23 233–4 Pf. 1·8 (1900); Dyar Pr. Ent. Soc. Wash. 4 476 (1901); Busck Pr. US. Nat. Mus. 24 731–49 sp. 1–39 (1902); Dyar Bull. US. Nat. Mus. 52 520–3 sp. 5854–92 (1902); Krft. Smith's Check List Lp. Bor-Am. 114 sp. 6397–6435 (1903); Busck Pr. Ent. Soc. Wash. 5 204, 214, 217 (1903); Pr. US. Nat. Mus. 27 763–6 (1904); Pr. Ent. Soc. Wash. 9 88–92 (1908).]

*Type 2*: *Tinea arenella* S-D. (= *gilvella* Hb.) Wlsm. 1908.

*PINARIS* Hb. Verz. Schm. 411 sp. 3961–72 (1826). *DEPRESSARIA* Hw. (A. *PINARIS* Hb.) Stph. Ill. Br. Ent. Haust. 4 197–200 sp. 1–12 (1834): 422 no. 1205 sp. 3962–72 (1835); Wlsm. Pr. Z. Soc. Lond. 1907 955 (1908).

Type 3: *Tinea atomella* S-D. (Stph. 1834, Wlsm. 1908).

*TICHONIA* Hb. Verz. Schm. 412 sp. 3981-3 (1826). *DEPRESSARIA* Hw. (*C. TICHONIA* Hb.) Stph. Ill. Br. Ent. Haust. 4 202-3 sp. 19 (1834): 422 no. 1207 sp. 3981 (1835); Wlsm. Pr. Z. Soc. Lond. 1907 955 (1908).

Type 4: *Tinea hypericella* Hb., Tr. (= *§ liturella* Hb.; Wlsm. 1908).

*EPELEUSTIA* Hb. Verz. Schm. 410 sp. 3946-50 (1826). *DEPRESSARIA* Hw. (*E. † EPILEUSTIA* Hb.) Stph. Ill. Br. Ent. Haust. 4 203-4 sp. 22-4 (1834): 421 no. 1202 sp. 3949-50 (1835). *EPELEUSTIA* Wlsm. Pr. Z. Soc. Lond. 1907 955 (1908).

Type 5: *Haemylis assimilella* Tr. (Wlsm. 1908).

*HAEMYLIS* Tr. Schm. Eur. 9 (1) 235-62 no. 139 sp. 1-22 (1832). *DEPRESSARIA* Hw. (*C. HAEMYLIS* Tr.) Stph. Ill. Br. Ent. Haust. 4 203 sp. 20-1 (1834). *HAEMYLIS* Dp. HN. Lp. Fr. 11 13, 119-56 no. 7 sp. 1510-25 Pf. 290.1 - 291.6 (1838): Cat. Meth. Lp. Eur. 334-5 no. 6 (1846). *HAEMYLIS* Wlsm. Pr. Z. Soc. Lond. 1907 955 (1908).

Type 6: *Depressaria (Volucra) conterminella* Z. (Z. 1839, Wlsm. 1908).

*DEPRESSARIA* Hw. (*B. VOLUCRA* Latr.) Z. Isis 1839 195-6 no. 26 B. sp. 27-30 (1839); Hdnrch. Lp. Eur. Cat. Meth. 85 no. 29b. sp. 508-12 (1851); Wlsm. Pr. Z. Soc. Lond. 1907 955 (1908).

### 1. *Agonopteryx rubristriata*, sp. n. (Tab. IV. fig. 31.)

*Antennae* cinereous, annulate with brown, rosy at the base. *Palpi* cinereous, much sprinkled with brown, nearly to the apex of the median joint; terminal joint cinereous above, rosy red beneath, a broad blackish band above the middle. *Head* cinereous; face whitish. *Thorax* greyish brown, speckled with cinereous. *Forewings* greyish brown, with a strong purplish vinous suffusion; a series of irregular pale ochreous spots and streaks along the costa, some groups of white scales below its middle and outer third, and a bright longitudinal brick-red streak below the costa, at about one-third from the base; below this are two black spots on the disc, one below the other, followed by a streak of white scales, with one or two brick-red scales at its outer end; on the outer end of the cell is a small white spot, there is also an outwardly oblique whitish streak arising from the dorsum, close to the base; some lines of alternate pale cinereous and purplish fuscous speckling run along and below the fold, some sprinkling of the same between the cell and the termen; cilia brownish grey, mottled with pale cinereous; on the underside the costa and termen are spotted with pale ochreous. *Exp. al.* 24 mm. *Hindwings* pale grey, a slight brownish tinge toward the apex; cilia whitish cinereous, a faint shade-line, which is reduplicated towards the flexus, running through their basal half; underside pale cinereous, strongly mottled with fuscous on their costal and terminal portions. *Abdomen* greyish brown, with a tawny tinge on the basal half. *Legs* pale cinereous, much sprinkled with greyish brown.

*Type* ♀ (65922) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*).  
Unique.

### TRICLONELLA Busck.

Type: *Triclonella pergandeella* Busck (Busck 1900).

*TRICLONELLA* Busck Jr. NY. Ent. Soc. 8 236-9 Pf. 9.2 (1900); Dyar Bull. US. Nat. Mus. 52 525 sp. 5916-7 (1902); Krft. Smith's Check List Lp. Bor-Am. 114 sp. 6463-4 (1903); Busck Pr. US. Nat. Mus. 35 190, 203 no. 17 (1908).

### 1. *Triclonella xanthota*, sp. n. (Tab. IV. fig. 32.)

*Antennae* brown, annulate with whitish; the basal joint, small at the base expanding outwardly, with a white spot above its apex. *Palpi* slender, recurved, the terminal joint not longer than the median; brown, with two white longitudinal lines on the outer side of the median joint, and one along the under-side of the terminal joint. *Head* brown; face paler. *Thorax* brownish yellow. *Forewings* yellow to two-thirds of their length, brown beyond, the change of colour abruptly defined, the inner edge of the brown apical portion obliquely convex toward the base, from the upper angle of the cell to the dorsum, the yellow encroaching upon it somewhat toward the costa; a small black dot on the cell, a little before the middle, and a yellowish spot beyond the end of the cell in the brown portion; cilia brown. *Exp. al.* 18 mm. *Hindwings* and cilia pale brown. *Abdomen* pale brown. *Legs* brownish, the median pair with two white lines along the tarsi; the hind pair somewhat whitish on their inner sides.

*Type* ♀ (65936) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

This species is very similar to *pergandeella* Busck in appearance and markings; it is however, larger, and differs in having a yellow spot on the brown apical portion of the forewings.

### 2. *Triclonella euzosta*, sp. n. (Tab. IV. fig. 33.)

*Antennae* fuscous at the base, and somewhat shaded with fuscous on the basal half, white beyond; with single hair pecten. *Palpi* slender, recurved, smooth, pointed, terminal joint as long as the median; fuscous on their inner and outer sides, white above and beneath, with a white dot at the end of the median on its inner surface. *Head* smooth; shining, fuscous. *Thorax* brownish fuscous. *Forewings* with the basal and apical fourths dark brown, the middle half occupied by a broad, bright, canary-yellow band, which, along the dorsum and at its two extremities, is bestrewed with shining silvery metallic scales, contrasting strongly with the adjacent dark brown colouring; cilia dark brown. *Exp. al.* 8 mm. *Hindwings* and cilia brownish grey. *Abdomen* and *Legs* shining, greyish fuscous; spurs whitish.

*Type* ♀ (5981, *Tabernilla*, Wlsm. Det. 1908) US. Nat. Mus. [*PT.* ♂ (68784) Mus. Wlsm. BM.]

*Hab.* AMERICA, C-S. Central America—PANAMA: CANAL ZONE: *Tabernilla*, VI. 1907 (*A. Busck*). South America—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*). Two specimens.

## ECBALLOGONIA, gen. n.

(ἐκβάλλω=to throw out; γωνία=an angle.)

*Type*: *Ecballogonia bimetallica* Wlsm. (Tab. IV. fig. 34.)

*Antennae*  $\frac{2}{3}$ , minutely biciliate; basal joint without pecten. *Labial Palpi* very slender, recurved, smooth; terminal joint at least as long as median. *Maxillary Palpi* short, meeting over the base of the haustellum. *Haustrum* scaled at base. *Ocelli* present. *Head* smooth, covered with wide, flattened, scales. *Thorax* smooth. *Forewings* of even width throughout, except at the attenuate and pointed apex, which is in a line with the middle of the base: *neuration* 12 veins; 7-8 stalked, 7 to slightly above apex; the rest separate; 1 basally furcate. *Hindwings* 1, the costa rather depressed in the middle, apex not depressed, acute; termen very oblique, tornus suddenly rounded to the straight dorsum, flexus well-developed; with distinct colour-pattern: *neuration* 8 veins; 6-7 separate and parallel; 3-4 stalked; 5 cubital, midway between 4 and 6. *Abdomen* somewhat flattened. *Legs* short; the hind tibiae smoothly clothed, with projecting tufts above each pair of spurs; the inner spurs longer than the outer ones, those of the median pair longer than the distal.

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Most nearly allied to *Macrobathra* Meyr. and *Gymnobathra* Meyr., which agree in having FW: 7 to costa and no antennal pecten, but at once distinguished from both by the peculiar clothing of the hind tibiae. In general appearance *Ecballogonia* reminds one most strongly of *Petalanthes* Meyr., which however differs in its less pointed hindwings and by having FW: 7 to termen.

1. ***Ecballogonia bimetallica***, sp. n. (Tab. IV. fig. 34.)

*Antennae* fuscous, whitish at the base beneath. *Palpi* silvery at the sides, fuscous beneath. *Head* fuscous; face with two lateral silvery streaks. *Thorax* tawny fuscous, anteriorly collared with steel-grey, tegulae steel-grey except at their base. *Forewings* tawny fuscous, with some elongate central shades of ochreous and many steel-grey spots and lines; a steel-grey spot near the base of the dorsum extends to the fold and is followed by a similar oblique metallic streak from fold to dorsum at one-fifth from the base; a small steel-grey costal spot, a little beyond the first dorsal spot, emits a broken subcostal line of steel-grey scales reaching to a whitish mediocostal spot; a dark steel-grey metallic line along the cell terminates a little above the apex, a second line, commencing about the middle, diverges in a broken series of scale-spots around the termen to the apex, ending in a short metallic apical streak; cilia tawny greyish fuscous along their base. *Exp. al.* 12 mm. *Hindwings* dark tawny fuscous, with a straight, narrow, whitish central transverse band, wider on the costa than on the dorsum, preceded by a patch of steel-grey metallic scales and followed by a line of the same extending to the apex parallel with the termen; cilia tawny greyish; the white band is very visible on the underside, accompanied by some metallic scaling. *Abdomen* shining, bluish grey; whitish beneath at the base. *Legs* tawny fuscous, with two white bands around the hind tibiae at the base of the whitish spurs; a single white spot on the second tarsal joint.

*Type* ♂ (65947) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (H. H. Smith). Unique.

NECEDES, gen. n.

*Type*: *Necedes stigmaphylli* Wlsm. (Jamaica).

*Antennae* almost as long as the forewings, biciliate; basal joint without pecten. *Labial Palpi* long, recurved, smooth, rising high above the vertex; terminal joint acute, nearly as long, or longer than median. *Maxillary Palpi* short, converging. *Haustellum* well-developed. *Ocelli* absent. *Head* with strong side-tufts, meeting above. *Thorax* smooth. *Forewings* widening from the base to vein 12, thence gradually narrowed to the depressed apex, beneath which the termen is strongly excavate at vein 6, below which it becomes convex to the dorsum: *neuration* 12 veins; 7-8 stalked, 7 to costa; 2-4 closely approximate at end of cell, 3-4 connate; 4 and 5 curving widely apart toward termen, where 5 becomes closely approximate to 6; upper fork of 1 subobsolete. *Hindwings* - 1, the costa somewhat depressed in the middle, termen oblique: *neuration* 8 veins; 6-7 separate and parallel; 3-4 stalked; 5 cubital, approximate to 4. *Abdomen* slightly depressed. *Legs*: hind tibiae hairy above.

[*Necedes stigmaphylli*, sp. n.]

*Antennae* pale cinereous, annulate with brown. *Palpi* recurved, acute, with long terminal joint; chestnut-brown, becoming whitish toward the apex, with a fuscous ring immediately preceding it. *Head* greyish brown. *Thorax* chestnut-brown, with a whitish bar posteriorly. *Forewings* pale brownish ochreous, suffused with dark chestnut-brown, especially at the flexus, on the oblique cuneiform fascia at one-fourth, on the end of the cell, and along the costa before the apex; from the base of the costa a mottled and streaky pale greyish shade extends obliquely outward to the dorsum at one-third, containing some brown spots; this is followed by the suffused cuneiform fascia which sends out two points on its outer side, one along the dorsum and one above it, the upper one bounding the lower edge of a conspicuous whitish costal patch, also dilated outward at its lower edge, and there somewhat tinged with ochreous—this contains on the cell a blackish dot; the suffused patch which succeeds it is connected to the costa by a rather paler chestnut-brown shade, through which runs a steely grey streak, starting from a white costal

speck and meeting at its outer end a narrow whitish streak, also from the costa—these both merge in a pale yellowish ochreous patch beyond the end of the cell; other steely grey scales and pale streaks pass through an elongate suffused patch lying on the dorsum below the pale ochreous patch, while above it, but separated by a line of blackish scales, the subcostal area is suffused with dark chestnut-brown nearly to the apex, the costal edge alone being pale ochreous, continued as a median streak at the base of the brownish cilia in the unciform apex; below the subapical incision is a pale ochreous, or almost whitish, patch on the termen, margined on its inner side by steely grey scales, and on its outer edge on the base of the cilia by parallel brown lines; the dorsal cilia brownish ochreous, somewhat mottled about the tornus. *Exp. al.* 11–12 mm. *Hindwings* subopalescent, grey; cilia brownish grey. *Abdomen* shining, brownish grey. *Legs* whitish, with a fuscous band across the hind tarsi, and brownish ochreous hair-clothing on the tibiae; anterior legs banded alternately with white and brownish fuscous.

*Larva* with 16 legs, elongate, slender, rather strongly constricted between the somites: pale greenish white, with slight indications of ochreous longitudinal lines; spots blackish, distinct, each emitting a rather long blackish hair; head and pronotal plates pale yellowish, with several small black spots; mesothorax and metathorax each with two conspicuous round black spots, one on either side. *Long.* 9 mm. Rolling the edges of the leaves of *Stigmaphyllon emarginatum* A. Juss. (*Malpighiaceae*).

*Type* ♂ (76045); ♀ (76044); ⊕ (76049) Mus. Wlsm. BM.

*Hab.* West Indies—JAMAICA: ST. ANN: Runaway Bay, 16.II – 31.III. 1905 (Wlsm.), ⊕ *Stigmaphyllon emarginatum*, 21. II, ex. 11.III – 12.IV. 1905, ⊕ 3–13. IV, ex. 15–21. IV. 1905 (Wlsm.). Twenty-two specimens.

*Necedes stigmaphylli* Wlsm. + *brevipalpis*, var., an sp. n.? A single ♀, also from Runaway Bay, taken 30. III. 1905, is indistinguishable in colour and markings from the series of *stigmaphylli*, but it has the remarkable peculiarity of possessing a much shorter and stouter terminal joint to the palpi—for this I would suggest the name *brevipalpis*, in the hope that with more material some further differences may be recognised, justifying a more detailed description. *Type* ♀ (76041) Mus. Wlsm. BM.]

### 1. *Necedes incisa*, sp. n.

*Antennae* pale cinereous, annulate with brown. *Palpi* pale cinereous, annulate on both joints with greyish brown, of which there are four bands on the median and two on the terminal joint, somewhat ill-defined. *Head* brownish ochreous. *Thorax* dark brownish, the tegulae tipped with ochreous. *Forewings*, with a narrow, deep, curved incision below the uncate apex, pale brownish ochreous, much mottled with dark brown, of which there is a spot at the base of the costa, a larger patch at the base of the dorsum, an outwardly oblique band, from the costa at one-fourth, extending a little across the middle of the fold, immediately followed by a pale, shining, steel-grey costal blotch, also reaching nearly to the fold, and extending to the middle of the wing; beyond this are two very oblique whitish costal streaklets, outwardly dark-margined, embedded in the dark brown colour which overspreads the remainder of the costal portion of the wing, with the exception of a narrow space below and adjacent to them which is pale ferruginous; a dark line from the end of the second streak, its upper edge tinged with ferruginous, runs to the apex, a whitish space below it being cut longitudinally, and narrowly margined outwardly, by lines of ferruginous scales; the termen is shining, whitish, a slender black curved line, outwardly margined with ferruginous, running through the cilia from the base of the subapical incision, a black dot preceding it at about its middle. *Exp. al.* 12 mm. *Hindwings* dark brownish grey; cilia scarcely paler. *Abdomen* shining, steel-grey. *Legs* greyish fuscous, obliquely banded externally with whitish.

*Type* ♀ (65951); ♂ (65954) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65952–3) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Four specimens.

### 2. *Necedes championella*, sp. n. (Tab. IV. fig. 35.)

*Antennae* pale fawn-brownish, whitish ochreous beneath. *Palpi* whitish ochreous, a slender fuscous line along the underside of the terminal joint is diffused around it before the apex. *Head* brownish ochreous. *Thorax* brownish ochreous, smeared with fawn-brown. *Forewings* fawn-brown, with some whitish



ochreous mottling near the base of the costa, and on either side of the base of the fold; a very pale whitish ochreous oblique streak, from the middle of the costa, nearly meets at its apex an oblique, slender, silvery line, leaving the costa a little beyond it, and some silvery scales precede the termen below the apex; the apex is somewhat caudate, the cilia above and below it pale whitish ochreous, a fawn-brown line running through them at right angles to a projecting point, which seems to take its origin from a brown apical spot, the outline of the wing being also marked by a slender dark brown marginal line; the dorsal and terminal portions of the wing are somewhat paler than the central, costal, and discal areas; cilia below the subapical incision pale fawn-brownish. *Exp. al.* 16 mm. *Hindwings* and cilia brownish cinereous. *Abdomen* and *Legs* brownish cinereous, with three dark tarsal spots above.

*Type* ♀ (65946) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Cerro Zunil, 4000-5000 ft., VIII-IX. 1880 (*G. C. Champion*).  
Unique.

[In addition to the species above described the following should be referred to this genus:—

*Necedes superatella* Wkr. *Gelechia superatella* Wkr. Cat. Lp. BM. 29 622-3 sp. 290 (1864)<sup>1</sup>.

n. syn. = *Oecophora* ? *ambigua* F & R. Reise Nov. Zool. Lp. 2 Pf. 138·4 (1875)<sup>2</sup>.

*Hab.* South America—BRAZIL: AMAZONS: Ega (*H. W. Bates*)<sup>1-2</sup>.

*Necedes propriella* Wkr. *Gelechia propriella* Wkr. Cat. Lp. BM. 29 622 sp. 289 (1864)<sup>1</sup>.

*Hab.* South America—BRAZIL: AMAZONS: Ega (*H. W. Bates*)<sup>1</sup>.—Drnt.]

### ECTAGA, gen. n.

(ἐκταγή = regulation.)

*Type*: *Ectaga promeces* Wlsm.

*Antennae*  $\frac{2}{3}$ ; basal joint without pecten. *Labial Palpi* long, curved, divergent; median joint widened with scales towards apex, smooth in front, loosely clothed above and at apex; terminal joint less than half median, slender, acute. *Maxillary Palpi* short, converging. *Haustellum* scaled at base. *Ocelli* absent. *Head* smooth, with longer hair-scales at sides. *Thorax* smooth. *Forewings* elongate, costa somewhat arched before middle, apex rounded, termen very obliquely rounded, surface with tufts of raised scales: *neuration* 12 veins; 7-8 stalked, to costa; rest separate, 2 from near end of cell, 2, 3, 4, equidistant, similarly curved; 5 somewhat approximate to 4 toward base, thence almost parallel with 6; 1 furcate at base. *Hindwings* 1, apex rounded, termen not sinuate, limbus developed: *neuration* 8 veins; 6-7 separate, parallel; 3-4 connate; 5 cubital, but arising nearer to 6 than to 4, somewhat bowed-up toward 6 beyond base. *Abdomen* slender. *Legs*: hind tibiae with long hairs above.

This genus differs from *Schiffermülleria* Hb. (= *Epicallima* Dyar) in the form of the palpi and in the presence of tufts of raised scales on the forewings. The species were probably collected in the pine forests.

#### 1. *Ectaga promeces*, sp. n.

*Antennae* cinereous, banded with umber-brown above. *Palpi* pale fawn-brownish, the median joint with three wavy, transverse, pale brownish fuscous bands externally. *Head* and *Thorax* fawn-brown, mixed with brownish fuscous. *Forewings* fawn-brown, mixed with brownish fuscous and some brownish cinereous scaling; an elongate patch of raised brownish fuscous scales lies immediately below the middle of the fold; a series of four small discal spots, also consisting of raised brownish fuscous scales, being distributed alternately along the upper and lower margins of the cell, the first and third in the upper series, the second and fourth in the lower, the latter about the lower angle of the cell; cilia sprinkled with the same three shades of colour as the wing-surface, but with a somewhat greyer

tint about the tornus. *Exp. al.* 19 mm. *Hindwings* greyish brown, slightly paler toward the base; cilia greyish brown. *Abdomen* and *Legs* greyish brown.

*Type* ♀ (65941) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65943) US. Nat. Mus.]

*Hab.* GUATEMALA: Totonicapam, 8500–10,000 ft., VIII. 1880 (*G. C. Champion*); Quiché Mts., 7000–9000 ft., VIII. 1880 (*G. C. Champion*). Three specimens.

## 2. *Ectaga canescens*, sp. n. (Tab. V. fig. 2.)

*Antennae* hoary greyish, delicately annulate with brownish fuscous beyond the middle. *Palpi* hoary greyish; the median joint with projecting brush-like scales above and beneath, and with three brownish fuscous bands externally and beneath; terminal joint short, slender, with a small median band and the extreme apex brownish fuscous. *Head* and *Thorax* hoary grey. *Forewings* hoary grey, profusely sprinkled with brownish and brownish fuscous scaling, forming a somewhat dense shade from the costa to the middle of the fold, but leaving the basal, dorsal, and terminal portions of the wing less obscure, with the exception of a narrow terminal shade continued around the apex, and a small spot at the extreme base of the costa; cilia hoary grey, much speckled with brownish fuscous. *Exp. al.* 16 mm. *Hindwings* straw-whitish, with a brownish cinereous tinge toward the apex; cilia pale brownish cinereous. *Abdomen* brownish cinereous, speckled and shaded with brownish fuscous. *Legs* pale brownish cinereous; hind tarsi obscurely banded with pale brownish fuscous.

*Type* ♀ (65945) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

## 3. *Ectaga lictor*, sp. n. (Tab. V. fig. 1.)

*Antennae* simple in ♂; hoary whitish, adorned with triangular fuscous spots throughout their length. *Palpi* hoary, minutely sprinkled with fuscous; terminal joint hoary, tipped with fuscous. *Head* and *Thorax* hoary. *Forewings* hoary greyish, with an obliquely placed streak of raised blackish scales at about one-fourth the wing-length, running from the upper edge of the cell to about the middle of the fold, a blackish dot lying at the end of the cell; a slight sprinkling of brownish scales occurs at about the middle of the dorsum and in the direction of the apex, a strong shade of the same colour, accompanied with greyish fuscous, occupying the costa from above the black streak to the apex; cilia hoary, with a few brownish scales accompanied by some of a more greyish shade. *Exp. al.* 18 mm. *Hindwings* shining, whitish cinereous; cilia pale brownish cinereous. *Abdomen* brownish cinereous. *Legs* pale cinereous, sprinkled with greyish fuscous externally; hind tibiae with long pale hairs above.

*Type* ♂ (65944) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: Quezaltenango, 7800 ft., 1880 (*G. C. Champion*). Unique.

The colouring of this insect is extremely difficult to describe, but one peculiarity is very noticeable, namely, that many of the scales on the forewings have a distinct pale cinereous, almost whitish, margin, their centres being brownish or greyish fuscous, according to the prevalent shade on that portion of the wing.

## DASYCERA Stph.

= § *DASYCERUS* Hw.; = \**OECOPHORA* (Ltr.) Crt.; = *STENOPTERA* Dp.

*Type* 1: *Tinea olivierella* F. (=†*oliviella* F., Stph.; = *aemulella* Hb.; Dp. 1838).

DASYCERA Stph. = § *DASYCERUS* Hw. Lp. Br. 524–5 no. 29 sp. 1–2 (1828). DASYCERA Stph. Syst. Cat. Br. Ins. 2 199–200 no. 297 sp. 7242–3 (1829). \**OECOPHORA* Crt. Guide Br. Ins. 180 no. 1003 sp. 1–2 (1831): Br. Ent. 9 expl. Pl. 408 (1832); Stph. Ill. Br. Ent. Haust. 4 227–9, 400 no. 330 sp. 1–2 (1834). DASYCERA Dp. Ann. Soc. Ent. Fr. 7 144 no. 24 (1838): HN. Lp. Fr. 11 22, 409–12 no. 24 sp. 1630 Pf. 303·1 (1838). *OECOPHORA* (A. DASYCERA

Stph.) Z. Isis **1839** 191-2 no. 21 sp. 1 (1839). \**LAMPROS* (p.) HS. SB. Schm. Eur. **5** 9, 37-8 (1853), 134 no. 50 sp. 290-2 (1854). \**LAMPREUS* (p.) HS. Syst. Lp. Eur. 52-3 no. 364 sp. 297-9 (1855). *DASYCERA* Stn. Ins. Br. Lp-Tin. **77**, 153-5 no. 20 sp. 1-2 Pf. **20**·5<sup>a-c</sup> (1854): List Br. An. BM. **16** Lp. 94 no. 20 sp. 1-2 (1854); Wkr. Cat. Lp. BM. **29** 671 no. 33 sp. 1-3 (1864); Hnmn. Schm. Deutsch. Tin. 373-4 no. 466 sp. 569-70 (1870), Tbl. 7, 50 no. 466 (1876); Stgr-Wk. Cat. Lp. Eur. 306-7 no. 252 sp. 2247-51 (1871); Chmb. Bull. US. GG. Surv. **4** 138 (1878); Snln. Vlind. Nederl. Micr. 433 713-5, 1088 no. 63 sp. 1 Pf. **9**·300-1 (1882); Riley, Smith's List Lp. Bor-Am. 103 sp. 5545-6 (1891). \**OECOPHORA* Meyr. HB. Br. Lp. 612, 633 no. 13 sp. 1-2 (1895); Wlsm. & Drnt. Ent. Mo. Mag. **34** 34-5 (1898); Stgr-Rbl. Cat. Lp. Pal. **2** 176 no. 378 sp. 3334-8 (1901). *DASYCERA* Dyar Bull. US. Nat. Mus. **52** 526 sp. 5932-3 (1902). \**OECOPHORA* Busck Pr. Ent. Soc. Wash. **5** 218 (1903); Krft. Smith's Check List Bor-Am. 115 sp. 6478 (1903); Busck Pr. US. Nat. Mus. **35** 190, 202-3 no. 16 (1908); Splr. Schm. Eur. **2** 346 no. 3 sp. 1-3 Pf. **89**·40-1 (1910).

Type 2: *Alucita sulphurella* F. (= *orbonella* Hb.; Dp. 1838).

*STENOPTERA* Dp. Ann. Soc. Ent. Fr. **7** 146 no. 27 (1838): HN. Lp. Fr. **11** 23-4, 428-31 no. 27 sp. 1638 Pf. **303**·3-4 (1838). *OECOPHORA* Ltr. (B. *STENOPTERA* Stph.) Hdnrch. Lp. Eur. Cat. Meth. 82 no. 24 sp. 323 (1851).

[*Oecophora* was published by Latreille in 1796 (Préc. Gen. Ins. 146-7 no. 17) as a geneonym, but without any indication of the species to be associated with it. In 1802 Latreille (HN. Crust-Ins. **3** 417) published a second description of *Oecophora* and cited as its Type *Tinea sulphurella* F., subsequently, in 1803 (Nouv. Dict. Hist-Nat. **16** 20) and 1805 (HN. Crust-Ins. **14** 251-2 no. 434 sp. 1-2) further descriptions of the genus were given together with translations of Fabricius' description of *Tinea sulphurella*. Werneburg (Btr. Schm. **1** 484-5, 585 note 424) wrote in 1864 "Hier beschreibt Fabr. unter den Namen *Sulphurella* ganz klar und unzweifelhaft *T. Bracteella* L. und es ist merkwürdig, dass Herr. Schäffer diese Schabe nicht citirt hat." There can be no doubt that *Tinea sulphurella* F. is synonymous with the species now known as *Alabonia bractella* L. (Stgr-Rbl. Cat. 3333), and consequently *Alabonia* Hb. must sink as a synonym of *Oecophora* Ltr.

Fabricius described two species under the name of *sulphurella*—*Alucita sulphurella* F. Ent. Syst. 670 sp. 19 (1775) and *Tinea sulphurella* F. Gn. Ins. 296 (1777). Curtis (Br. Ent. **9** expl. Pl. 408) cited *Tinea sulphurella* F. as the Type of *Oecophora*, but the insect he figured and described is *Alucita sulphurella* F.! Arising from this mistake the yellow hindwinged *Alucita sulphurella* has wrongly been regarded as the type of *Oecophora* Ltr.: it is obvious that *Dasycera* Stph. must be reinstated in lieu of \**Oecophora* (Ltr.) Crt.—Drnt.]

### 1. *Dasycera auricollis*, sp. n. (Tab. V. fig. 3.)

*Antennae* strongly thickened with scales; purplish fuscous. *Palpi* purplish fuscous. *Head* and *Thorax* purplish fuscous, with a golden yellow collar—this colour is diffused beneath on the thorax and femora. *Forewings* dark purplish, minutely irrorate with whitish scale-tips along the costal half from base

to apex; cilia dark purplish, inclining to brownish grey at their outer extremities below the apex. *Exp. al.* 14 mm. *Hindwings* dark tawny brownish fuscous; cilia scarcely paler. *Abdomen* and *Legs* dark purplish fuscous, with faint pale spots at the base of the first and second hind tarsal joints.

*Type* ♂ (65940) Mus. Wlsm. (*Godm-Salv. Coll.*) B.M.

*Hab.* GUATEMALA: Quiché Mts., 7000-9000 ft., VIII. 1880 (*G. C. Champion*).  
Unique.

Very similar in appearance to the North American species 5932 *newmanella* Clms., from which it differs in the absence of the yellow streak on the forewings, and the presence of white irroration.

### BORKHAUSENIA Hb.

*Type*: *Phalaena Tinea minutella* L. (Snln. 1882).

BORKHAUSENIA Hb. Verz. Schm. 420 sp. 4084-6 (1826); [\**Stph.* Ill. Br. Ent. Haust. 4 423 no. 1321 (1835). \**OECOPHORA* (p.) Stgr-Wk. Cat. Lp. Eur. 307-8 no. 253 sp. 2252-96 (1871); (p.) Z. Hor. Soc. Ent. Ross. 13 388-98 sp. 8-9 Pf. 5·137-8 (1877)]. *OECOPHORA* Ltr. (A. BORKHAUSENIA Hb.) Snln. Vlind. Nederl. Micr. 733, 1088 no. 68<sup>a</sup> sp. 1 (1882). [\**ACOMPSIA* (p.) Meyr. HB. Br. Lp. 613, 633-8 no. 14 sp. 1-16 tf. 634 (1895)]. BORKHAUSENIA Wlsm. & Drnt. Ent. Mo. Mag. 34 34-5 (1898); Stgr-Rbl. Cat. Lp. Pal. 2 176-8 no. 379 sp. 3339-402 (1901); [\**OECOPHORA* (p.) Dyar Bull. US. Nat. Mus. 52 525-6 sp. 5921-30 (1902)]; Meyr. Tr. Roy. Soc. S-Aust. 26 168 (1902): 30 35-6 (1906): Pr. Z. Soc. Lond. 1908 732-3 (1908): Tr. N-Z. Inst. 42 65 (1909): 43 63-5 (1910): Jr. Bomb. NH. Soc. 20 143 (1910): Rec. Ind. Mus. 5 224 (1910); Busck Pr. US. Nat. Mus. 27 766-7 (1904): 30 730 (1906): 35 190, 203-4 no. 19 (1908): Can. Ent. 40 194-5 (1908); Splr. Schm. Eur. 2 346-9 no. 5 sp. 1-48 tf. 346·116 Pf. 89·43-50 (1910).

#### 1. *Borkhauseniascriptella* Busck.

*Borkhauseniascriptella* Busck Can. Ent. 40 194-5 (1908)<sup>1</sup>: Pr. US. Nat. Mus. 35 204 (1908)<sup>2</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-2</sup>—MARYLAND<sup>1</sup>—PENNSYLVANIA<sup>1</sup>—NORTH CAROLINA: 1883 (*H. K. Morrison*). Central America—MEXICO: [? DURANGO]: Milpas, 5900 ft. (*Forrer*)—COSTA RICA: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*).

### Fam. 4. ETHMIADAE.

†*ETHMIIDAE* Busck Pr. Ent. Soc. Wash. 11 91-2 (1909).

#### ETHMIA Hb.

=*CHALYBE* Dp.; =*DISTHYMNIA* Hb.; =*PSECADIA* Hb.; =*ANESYCHIA* Hb. (= *MELANOLEUCA* Stph.); =\**YPONOMEUTA* (Ltr.) Crt.) =§*AEDIA* Dp.; =*AZINIS* Wkr. (= *THEOXENIA* Wlsm.); =*TAMARRHA* Wkr.; =*BABAIAXA* Busck.

*Type* 1: *Tinea aurifuella* Hb. (= \**pyrausta* Hb.; Hb. 1822).

ETHMIA Hb. Verz. Schm. 163 sp. 1692 (1822). *CHALYBE* Dp. HN. Lp. Fr. 10 296-7, 343-6 no. 4 sp. 1487 Pf. 286·7 (1836).

Type 2: *Tinea funerella* F. (Hb. 1826).

DISTHYMNIA Hb. Verz. Schm. 413 sp. 3996 (1826).

Type 3: *Tinea decemguttella* Hb. (Stph. 1834).

PSECADIA Hb. Verz. Schm. 412 sp. 3990-1 (1826).

Type 4: *Phalaena Tinea pusiella* L. (Wstwd. 1840).

ANESYCHIA Hb. Verz. Schm. 413 sp. 3992-5 (1826). *MELANOLEUCA* Stph. Cat. Br. Ins. 2 202-3 no. 305 sp. 7266-9 (1829). \**YPONOMEUTA* (Ltr.) Crt. Br. Ent. 9 expl. Pl. 412 pp. 1-2 (1832).

Type 5: *Alucita bipunctella* F. (= *echiella* S-D.; Dp. 1836).

§*AEDIA* Dp. HN. Lp. Fr. 10 296, 305-16 no. 2 sp. 1474-7 Pf. 285·2-3, ·5-6 (1836).  
[§Homonymous with *AEDIA* Hb. (1825) *Lp.*]

Type 6: *Azinis hilarella* Wkr. (Wkr. 1863).

AZINIS Wkr. Cat. Lp. BM. 28 541-2 no. 8 sp. 1 (1863). *THEOXENIA* Wlsm. Moore's Lp. Ceyl. 3 506-7 Pf. 209·4 (1887).

Type 7: *Tamarrha nivosella* Wkr. (Wlsm. 1897).

TAMARRHA Wkr. Cat. Lp. BM. 29 816-7 no. 110 sp. 1-2 (1864).

Type 8: *Psecadia delliella* Fnld. (Busck 1902).

BABAIAXA Busck Jr. NY. Ent. Soc. 10 95-6 Pf. 12·4 (1902).

### 1. *Ethmia cyanea*, sp. n. (Tab. V. fig. 4.)

*Antennae* somewhat flattened laterally, and slightly serrate beneath; purplish blue. *Palpi* erect, the terminal joint half the length of the median; shining, purplish blue. *Head* and *Thorax* shining, dark greenish blue. *Forewings* unicolorous, shining, dark greenish blue; cilia purple. *Exp. al.* 21-23 mm. *Hindwings* and cilia dark purple. *Abdomen* deep greyish green. *Legs* shining, purplish on their inner sides; dark green externally.

Type ♀ (65886); ♂ (65887) *Atoyac*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65888, 4656); (5854 Wlsm. Det. 1908) U.S. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: *Atoyac*, IV. (*H. H. Smith*); *Jalapa*, 4500 ft. (*W. Schaus*); *Coatepec* (*W. Schaus*). Six specimens.

### 2. *Ethmia baliostola*, sp. n. (Tab. V. fig. 5.)

*Antennae* brownish fuscous, a black spot adjacent to the dull whitish basal joint. *Palpi* dull white, with three black bands around the median joint, and two around the terminal, on which latter they occupy nearly the whole surface, an oblique whitish line separating them. *Head* bone-white, a fuscous patch posteriorly, adjacent to the thorax. *Thorax* bone-white, with two small blackish spots near the base of the tegulae, one median spot behind them, and five marginal spots. *Forewings* bone-white, much mottled with dark brownish fuscous, and sprinkled with scales of the same colour, between the larger spots and mottlings; of these, the most conspicuous are three irregular elongate patches, ranged obliquely outward, from below the costa across the cell, to the fold at about half the wing-length—the lower of these rests on the fold, and is preceded by a streak along it from the base, the middle one being preceded by a shorter streak on the cell, and followed by a still larger irregular longitudinal patch, with which it is somewhat confluent, reaching to the termen above the middle; above and below this are small patches of fuscous



mottling, which is also very plentiful below the costa and near the base, and below the fold; a series of three costal, one apical, five terminal and one tornal, squarish black spots precede the bone-white cilia which are streaked with fuscous below the middle. *Exp. al.* 32 mm. *Hindwings* iridescent, pearly lilac, shaded with brownish grey around the margins and across the apex beyond their middle; cilia pale brownish grey, with a darker shade-line running through them near their base; there is a tolerably strong ochreous hair-pencil from the base of the costa in the ♂. Abdomen dark greyish brown; anal tuft bright ochreous. *Hind Legs* bone-whitish, tibiae shaded with greyish fuscous externally, the fringe above tending to ochreous; hind tarsi broadly banded with dark brownish fuscous.

*Type* ♂ (5855 Wlsm. Det. 1908) U.S. Nat. Mus.

*Hab.* COSTA RICA: Banana River, III. 1906 (*W. Schaus*). Unique.

### 3. *Ethmia coronata*, sp. n. (Tab. V. fig. 6.)

*Antennae* dark fuscous. *Palpi* whitish, with a fuscous ring before the middle of the median joint, and a narrower ring before its apex; two broad rings on the terminal joint. *Head* dirty white, with a large fuscous spot above posteriorly. *Thorax* dirty white, with fuscous spots—one central, six large, marginal, and one small, posterior. *Forewings* smoky white, suffused with dark brownish fuscous above the fold, over which this colour slightly projects, in a broad patch before, and another about the middle; below the fold, and before the second projection, are two fuscous spots, a reduplicated fuscous spot lying in the fold before its outer extremity; the white colour is thrown up obliquely, across the fold to the end of the cell, and is produced along the termen and reproduced about the apex, reappearing more slightly along the costa, but much mixed and clouded with fuscous; a series of ill-defined fuscous spots occurs around the apex and termen, at the base of the dirty white cilia, which are interrupted by fuscous below the apex. *Exp. al.* 31 mm. *Hindwings* pale, iridescent, semitransparent, rosy pink; cilia yellowish white. *Abdomen* light ochreous. *Legs* dirty whitish ochreous.

*Type* ♂ (65956) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Chilpancingo, 4600 ft., VI. (*H. H. Smith*). Unique.

Allied to 5899 *discostrigella* Chmb., but much larger, and easily distinguished by the colour of the hindwings as also by the paler dorsum and subplical spots.

### 4. *Ethmia flavicaudata*, sp. n. (Tab. V. fig. 7.)

*Antennae* olivaceous, dusted with dirty white. *Palpi* slender, recurved to above the vertex, the terminal joint scarcely more than half the length of the median; dirty white, with two dark brownish annulations on the median joint, and two on the terminal, separated by approximately equal spaces. *Head* and *Thorax* dirty whitish, the latter somewhat spotted with olive-grey; the base of the tegulae olive-grey. *Forewings* dirty white, much suffused and blotched with dark olive-grey, a slight iridescent greenish metallic sheen in certain lights on the basal half, especially below the fold; the olive-grey blotches are about equally distributed over the wing-surface, to beyond the middle, and are rendered confluent with each other by a suffusion of scales of the same colour between them; beyond the middle, an irregular band of semidetached blotches crosses the wing from costa to dorsum, a central one, larger than the others, extending nearly to the termen and staining the terminal cilia below the apex and termen, before the base of the white cilia. *Exp. al.* 26 mm. *Hindwings* purplish grey, with an aeneous brown gloss around their margins, and along the basal third of the white cilia. *Abdomen* brownish grey, the terminal two segments yellow-ochreous. *Legs* whitish, the tarsi with several brownish grey annulations.

*Type* ♀ (4658 *San Juan*) Mus. Wlsm. BM. [*Type* ♂ (5861 Wlsm. Det. 1908); *PT.* (5862 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: San Juan, 600 ft. (*W. Schaus*); Cordova, IV. 1908 (*F. Knab*). Three specimens.

### 5. *Ethmia heptasticta*, sp. n. (Tab. V. fig. 8.)

*Antennae* brownish fuscous, glaucous toward the base; the basal joint brownish fuscous above. *Palpi* white, with two black bars across the median joint, and black annulations on the terminal. *Head* yellowish white. *Thorax* white, with seven black spots, two anterior, one median, and four behind the middle in two lateral pairs; tegulae white, with a dark brownish fuscous spot at the base. *Forewings* broad, with the costa rounded, apex obtusely depressed, termen oblique; dark brownish fuscous above the fold, white with some smoky suffusion beneath it; the dark colour projects across the fold in two places, at about the middle of the wing, and at about one-fourth from the base, while between and below these projections is a rounded spot of the same colour, nearer to the inner than to the outer; the white ground-colour throws a projection into the dark suffusion near the outer end of the fold, reaching as high as vein 5 at the end of the cell, and there is a good deal of admixture of white scales along the termen and before the apex, also more slightly along the costa; around the apex and termen is a series of seven or eight distinct black marginal spots at the base of the white cilia, which are clouded on their outer half with brownish fuscous. *Exp. al.* 24 mm. *Hindwings* rather dark yellowish brown; cilia pale yellowish brown. *Abdomen* brownish ochreous, the basal segment pale ochreous, the terminal segment rich orange-ochreous. *Legs* whitish, banded and sprinkled with brownish fuscous.

*Type* ♀ (65958) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Tonalapa, VI. (H. H. Smith). Unique.

Allied to 5903 *marmorea* Wlsm., but with broader and darker wings, the hindwings especially being much more deeply coloured.

### 6. *Ethmia penthica*, sp. n. (Tab. V. fig. 9.)

*Antennae* smoky brown. *Palpi* with the median joint smoky brown, the terminal white, with two dark brown bands, one before the middle, the other before the apex. *Head* dirty whitish. *Thorax* dull white. *Forewings* smoky brown, the dorsal third white, throwing an obtusely flattened projection upward, before the middle, above a small brown spot, and an angulated projection upward beyond the middle; there are a few white scales at the apex; cilia corresponding in colour to the adjacent wing-surface. *Exp. al.* 17 mm. *Hindwings* brown; cilia scarcely paler. *Abdomen* brownish fuscous; anal tuft ochreous. *Legs* dull brownish cinereous.

*Type* ♂ (5857 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: OAXACA: Oaxaca (W. Schaus). Unique.

### 7. *Ethmia mülleri*, Busck. (Tab. V. fig. 10.)

*Ethmia mulleri* Busck Pr. Wash. Ent. Soc. 11 212 (1910)<sup>1</sup>.

*Type* ♂ (12810) US. Nat. Mus. [CT. (33829) Mus. Wlsm. BM.]

*Hab.* MEXICO<sup>1</sup>: PUEBLA: Tehuacan, VII, IX. (R. Müller)<sup>1</sup>: GUERRERO: Chilpancingo, 4600 ft., VI. (H. H. Smith).

The specimen figured (65957, *Chilpancingo*) is somewhat faded, and the darkened costal area is consequently not so strongly contrasted with the white ground-colour as in fresher specimens.

### 8. *Ethmia perpulcra*, sp. n. (Tab. V. fig. 14.)

*Antennae* white, barred with black above beyond the middle. *Palpi* white, thickly dusted with black on their outer sides. *Head* white. *Thorax* white, with two pairs of very dark bottle-green spots. *Forewings* white, with many dark bottle-green spots, some confluent or streaky; a quadrate patch of violet-

red, on the middle of the dorsum, reaching more than half-way across the cell, and broken by an obliquely transverse ziczac line of narrowly connected white spots running through it; a bright golden orange patch extends over the apex and termen, narrowly stained with violet-red on its inner edge which is excavate above the middle, the excavation partly occupied by a nearly isolated violet-red spot; the dark green spots form a series of broken irregular costal streaks before the middle, where two touch the upper edge of the red dorsal patch; these are followed by a single costal spot, and further by a group of spots or streaks, bronzy brown at their base on the extreme margin, as are also some of those which precede them, and produced to form a confused letter-like pattern beyond the end of the cell; cilia white, tipped with steel-grey at the apex. *Exp. al.* 27 mm. *Hindwings* shining, steely whitish toward the base, becoming gradually suffused outward with pale golden brownish; a pale golden line along the termen at the base of the white cilia. *Abdomen* smoky greyish fuscous, brownish grey at the base; anal tuft ochreous. *Legs* white, barred with smoky fuscous.

*Type* ♀ (5856 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: VERA CRUZ: Orizaba (*W. Schaus*). Unique.

### 9. *Ethmia phylacis*, sp. n. (Tab. V. fig. 12.)

*Antennae* black toward the base, fading to chestnut-brown and brownish grey outwardly; speckled with white above on their basal half. *Palpi* evenly and closely clothed throughout; brownish grey, blackish at the base externally. *Head* white. *Thorax* white, with a chestnut spot posteriorly, and a blackish band across the tegulae. *Forewings* creamy white, with greenish black mottling at the base on the costal half, somewhat mixed with chestnut-brown at its outer edge, a single dark green spot occurring below the fold; the costa beyond the middle is tinged with grey-brown, the same colour being diffused downward along the edges of a broad reddish chestnut median band, crossing the wing and somewhat dilated to the dorsum, showing on its surface several bluish white flecks; the apex is reddish chestnut, also flecked with blue-white, and becoming golden orange along the termen to the dorsum; the anterior edge of the apical patch is stained with brownish grey, a spot of the same lying between it and the median band, scarcely below the middle; cilia brownish, fading to white at the tornus. *Exp. al.* 23 mm. *Hindwings* pale purplish grey, tinged with golden yellow around the apex and termen including the cilia, which fade to yellowish white about the flexus. *Abdomen* grey-brown above and beneath, broadly white along the sides; anal segments yellowish.

*Type* ♀ (65960) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: DURANGO: Presidio (*A. Forrer*). Unique.

This species differs from *exornata* Z., in the greater concentration of the greenish mottling at the base, in the single spot below the fold, instead of a pair, and in the form of the median band, which in *exornata* does not reach the costa; it differs also in the limitation of the golden orange to the lower portion of the termen—in *exornata* this is continued around the apex; the palpi also are less smooth and less white.

### 10. *Ethmia terpnota*, sp. n. (Tab. V. fig. 11.)

*Antennae* fuscous. *Palpi* reaching to the level of the vertex; fuscous, the terminal joint slightly sprinkled with whitish. *Head* white above, face dark steel-blue. *Thorax* white, mixed with brownish grey, a dark steel-blue spot posteriorly, and one on the base of the tegulae. *Forewings* white, suffused with smoky brownish grey along the costa, more widely along the middle where this shade touches the upper edge of a bright copper-coloured, quadrate, mediodorsal patch, of which the upper angle, at its inner extremity, is obliquely cut off; this patch contains a slender ziczac line and some sparse sprinkling of white scales; adjacent to the base, above the fold, are several, more or less confluent, obscure spots of dark steel-blue, fading into the costal shade, a single detached spot lying below the fold; a few similar dark spots form a short parallel line preceding the apex and termen, where the grey cilia are stained

along their base with dark steel-blue; tornal cilia white. *Exp. al.* 26–29 mm. *Hindwings* pale, shining, brownish grey; cilia white. *Abdomen* brownish fuscous; anal tuft ochreous. *Legs* brownish fuscous; hind tarsi slightly spotted with white.

*Type* ♂ (65959) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [Type ♀ (5859 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*); San José, 4000 ft., X–XI. 1906 (*W. Schaus*); Tuis, 2400 ft., 1908 (*W. Schaus*). Six specimens.

### 11. *Ethmia scythropa*, sp. n. (Tab. V. fig. 13.)

*Antennae* fuscous, the basal joint elongate, enlarged. *Palpi* bone-grey fading to bone-white toward the apex.

*Head* white. *Thorax* brownish fuscous, a grey spot, with some white scales, posteriorly; the tegulae stout, densely clothed, capable of being held erect. *Forewings* rather shining, pale brownish fuscous, with a short blackish basal patch sprinkled with groups of white scaling; this is followed on the dorsum by a white patch, not reaching the middle; on the outer half of the dorsum is another smoky blackish patch, rising nearly to the costa, but interrupted by the paler ground-colour on the cell, and streaked with some angulate white ziczac lines below the cell; another whitish patch occupies the tornus and termen, extending more narrowly to the apex; cilia brownish fuscous toward the apex, fading to whitish below. *Exp. al.* 26 mm. *Hindwings* and cilia shining, brownish fuscous; anal tuft bright ochreous.

*Legs* pale brownish fuscous.

*Type* ♂ (5858 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* COSTA RICA: Banana River, III. 1907 (*W. Schaus*). Unique.

A large species, having the pattern indistinct through the brownish suffusion of what would otherwise have been a white ground-colour; this suffusion gives a generally blurred appearance to the wing-surface.

### 12. *Ethmia hammella*, Busck. (Tab. V. fig. 15.)

*Ethmia hammella* Busck Pr. Ent. Soc. Wash. 12 53–4 (1910) <sup>1</sup>.

*Type* ♂ (12844) US. Nat. Mus. [*CT.* (33830) Mus. Wlsm. BM.]

*Hab.* COSTA RICA <sup>1</sup>: Tuis, 5800 ft. <sup>1</sup>, 30. VIII. 1908 (*W. Schaus*).

## Fam. 5. BLASTOBASIDAE.

### VALENTINIA Wlsm.

Type: *Gelechia glandulella* Riley (Wlsm. 1907).

VALENTINIA Wlsm. Pr. U.S. Nat. Mus. 33 200–2 (1907); Wlsm. & Drnt. Ent. Mo. Mag. 45 47, 48 no. 7 (1909); Dietz, Tr. Am. Ent. Soc. 36 5, 13–20, 69 no. 3 sp. 1–8 Pf. 1–8–11 (1910).

### 1. *Valentinia tarachodes*, sp. n. (Tab. V. fig. 16.)

*Antennae* minutely biciliate and slightly serrate in ♂, with a strong basal notch and pecten; pale bone-colour. *Palpi*, terminal joint more than half the length of median; pale cinereous, scarcely shaded externally. *Head* and *Thorax* hoary, tegulae touched with pale brownish. *Forewings* ♀, hoary, slightly

shaded at the extreme base with pale brownish, which vanishes outward in a hoary whitish band at one-third, angulate outward at its middle; beyond this the pale brown shading is renewed with a slight speckling of greyish brown, or greyish fuscous, spreading over the remainder of the wing, but leaving three spots of the darker shade, one on the disc a little before the middle of the wing, another at the end of the cell, and a third, straight below it, at the lower angle of the cell, all distinctly visible; around the termen and apex the greyish brown or brownish fuscous shading has a tendency to break into narrow spots, to the number of seven or eight, before the hoary-speckled pale cinereous cilia: ♂, with the discal and marginal spots less distinct, the whole wing-colouring being somewhat more blurred and uniform. *Exp. al.* 15-17 mm. *Hindwings* pale greyish brown; cilia pale brownish cinereous. *Abdomen* brownish cinereous. *Legs* with alternate bands of hoary and greyish brown rough scaling to the end of the tibiae; hind tarsi pale brownish cinereous, the first joint slightly hairy.

*Type* ♀ (65526); ♂ (65527) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

Allied to 5979 *glandulella* Riley, but with somewhat narrower wings; it should also be closely allied to *quintancellula* Dietz, but is a larger species.

## 2. *Valentinia neptes*, sp. n. (Tab. V. fig. 17.)

*Antennae* ♂ minutely biciliate, with strong notch and pecten; very pale fawn. *Palpi* with the terminal joint fully half the length of the median; very pale fawn. *Head* and *Thorax* very pale fawn. *Forewings* very pale fawn, with a slight streaky shading of pale fawn-grey, and three minute fuscous dots in the usual position, the two at the end of the cell being directly one above the other, no plical spot is visible; around the apex are a few very obscure fawn-grey streaks at the base of the whitish ochreous cilia. *Exp. al.* 16 mm. *Hindwings* pale grey, with a scarcely perceptible tinge of fawn; cilia very pale fawn. *Abdomen* and *Legs* very pale fawn.

*Type* ♂ (65528) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

In appearance this species is almost indistinguishable from 5982 *Holcocera livorella* Z., a Texan form with broader hindwings and different neuration.

## 3. *Valentinia bromeliae*, sp. n.

*Antennae* ochreous. *Palpi* ochreous, dusted with purplish fuscous on their outer sides. *Head* and *Thorax* ochreous. *Forewings* purplish fuscous, mixed with ochreous, or, perhaps more correctly, ochreous, almost entirely obliterated by a purplish fuscous suffusion; a short basal patch, widened on the costa, but narrowed to the dorsum, where it reaches only half-way to the flexus, remains ochreous without perceptible suffusion, but the only other parts of the wing in which the ochreous ground-colour becomes visible, except as a generally distributed slight mixture, is in the immediate vicinity of a black discal spot, before the middle, and immediately preceding the upper one of a pair of black spots at the end of the cell; cilia olivaceous bronzy grey. *Exp. al.* 13-14 mm. *Hindwings* brownish grey; cilia bronzy grey. *Abdomen* greyish fuscous. *Legs* ochreous; hind tibiae and tarsi with bands of dark fuscous suffusion on their outer sides.

*Type* ♀ (5866); ♂ (5867); *PTT.* (5868-9 Wlsm. Det. 1908) US. Nat. Mus. [*PTT* (33645-8) Mus. Wlsm. BM.]

*Hab.* MEXICO: VERA CRUZ: Cordova, ⊕ *Bromelia* sp., excl. 2-8. V. 1908 (*F. Knab*) Eight specimens, bred from débris at base of leaves of *Bromelia*.



## BLASTOBASIS Z.

=EPISTETUS Wlsm.; =PROSTHESIS Wlsm.

Type 1: *Oecophora* (Scythris) *phycidella* Z. (Hnmn 1870).

BLASTOBASIS Z. Lin. Ent. **10** 171 (1855): Hor. Soc. Ent. Ross. **13** 429-41 sp. 1-6 Pf. **6** 151-4 (1877); Wlsm. Pr. US. Nat. Mus. **33** 200, 202-4 (1907): Wlsm. & Drnt. Ent. Mo. Mag. **45** 47, 48 no. 8 (1909); Dietz Tr. Am. Ent. Soc. **36** 5-10, [*Blastobasis*] 69 no. 1 sp. 1-7 Pf. **1** 1-6 (1910).

Type 2: *Epistetus divisus* Wlsm. (Wlsm. 1894).

EPISTETUS Wlsm. Tr. Ent. Soc. Lond. **1894** 538, 552-3 sp. 54-5 (1894): Pr. US. Nat. Mus. **33** 200 (1907).

Type 3: *Prosthesis exclusiva* Wlsm. (Wlsm. 1908).

PROSTHESIS Wlsm. Pr. Z. Soc. Lond. **1907** 953 no. 29 sp. 57 Pf. **52** 5 (1908).

1. *Blastobasis guilandinae* Busck.

*Blastobasis guilandinae* Busck Pr. US. Nat. Mus. **23** 234 Pf. 1-9 (1900)<sup>1</sup>; Dyar Bull. US. Nat. Mus. **52** 528 sp. 5967 (1902)<sup>2</sup>; Krt. Smith's Check List Bor-Am. 115 sp. 6511 (1903)<sup>3</sup>; Dietz Tr. Am. Ent. Soc. **36** 6, 69 sp. 1 (1910)<sup>4</sup>.

Type o (4942) US. Nat. Mus.

*Hab.* AMERICA, N-C. United States<sup>1-4</sup>—FLORIDA<sup>1-4</sup>: Palm Beach, ⊕ in stems *Guilandina bonducella*, 5. III, excl. 30. III. 1900 (*H. G. Dyar*)<sup>1, 4</sup>. Central America—MEXICO: TABASCO: Teapa, II. (*H. H. Smith*).

A single ♂ (65531) without palpi and abdomen, is either *guilandinae* or a very closely allied species. It is a true *Blastobasis* with notched antennae and HW:4 absent.

## HOLCOCERA Clms.

=HYPATOPA Wlsm. (= \**HYPATIMA* HS., nec Hb.); =CATACRYPSIS Wlsm.; =CYNOTES Wlsm.; =PROSODICA Wlsm.

Type 1: *Holcocera chalcfrontella* Clms. (Wlsm. 1907).

HOLOCERA Clms. Pr. Ent. Soc. Phil. **2** 121-2 (1863): Clms-Stn. Tin. N-Am. pp. xi, 225-7 sp. 1-4 (1872); Wlsm. Pr. US. Nat. Mus. **33** 200 204-6 (1907): Wlsm. & Drnt. Ent. Mo. Mag. **45** 47, 48, 50-1 no. 10 (1909); Dietz Tr. Am. Ent. Soc. **36** 5, 23-67, 70-1 no. 6 sp. 1-45 Pf. **2** 14-4 39 (1910).

Type 2: *Oecophora* (Prays) *inunctella* Z. (Z. 1855; Wlsm. 1907).

HYPATOPA Wlsm. = \**HYPATIMA* (nec Hb.) HS. Schm. Eur. **5** 12, 47 no. 79 (1853): **6** Pf. **13** 15-17 (1853): **5** 212 no. 79 sp. 600-2 (1854). HYPATOPA Wlsm. Pr. US. Nat. Mus. **33** 200, 211-12 (1907).

Type 3: *Catacrypsis nucella* Wlsm. (Wlsm. 1907).

CATACRYPSIS Wlsm. Pr. US. Nat. Mus. **33** 200, 206-10 (1907).

Type 4: *Blastobasis? iceryaeella* Riley (Wlsm. 1907).

CYNOTES Wlsm. Pr. US. Nat. Mus. 33 200, 210-11 (1907).

Type 5: *Prosodica nephalia* Wlsm. LN. (Wlsm. 1907).

PROSODICA Wlsm. Pr. US. Nat. Mus. 33 200 (1907).

### 1. *Holcocera basiplagata*, sp. n.

*Antennae* fawn-brown; the basal joint cream-ochreous, with slight pecten, a notch beyond it in the ♂. *Palpi* cream-ochreous, shaded with brown externally on the median joint. *Head* cream-ochreous. *Thorax* fawn-brown, patagia and tegulae cream-ochreous, the latter fawn-brown at their base. *Forewings* rather tawny fawn-brown, with ill-defined longitudinal cream-ochreous smearing between the veins and below the fold; a short clear cream-ochreous patch lies at the extreme base and three dark discal dots are obscurely indicated, one scarcely before the middle of the wing, the other two at the upper and lower angles of the cell respectively; cilia brown at the apex and costa, shading to brownish ochreous at the tornus, a few creamy scales lying around the margin at their base. *Exp. al.* 18-20 mm. *Hindwings* shining, brownish grey, with a slight ochreous tinge; cilia dull, pale brownish ochreous. *Abdomen* whitish cinereous. *Legs* fawn-brownish, with faintly paler tarsal spots and pale cinereous hairs above the hind tibiae.

Type ♂ (65532, *Panajachel*); ♀ (65533) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65534) US. Nat. Mus.; (3277 Drnt. Det. 1898, *Costa Rica*) Mus. J. de Joannis.]

*Hab.* GUATEMALA: *Panajachel*, 5000 ft., 30. XII. 1880 (*G. C. Champion*); *Balheu*, 3850 ft., 3-5. II. 1880 (*G. C. Champion*); *Las Mercedes*, 3000 ft., IX-X. 1880 (*G. C. Champion*)—COSTA RICA (*Mus. J. de Joannis*). Four specimens.

### 2. *Holcocera titanica*, sp. n. (Tab. V. fig. 18.)

*Antennae* cinereous, sprinkled with fuscous; with a strong pecten at the base. *Palpi* cinereous, thickly spread with dark fuscous, except around the apex of the median joint and on its inner side. *Head* and *Thorax* hoary cinereous, sprinkled with fuscous. *Forewings* hoary cinereous, much shaded and sprinkled with fuscous, which tends to form indistinct longitudinal streaks; of these the darker, therefore somewhat more conspicuous, are, one running outward from the flexus, but not quite reaching the middle of the fold, another along the median portion of the fold itself, and a diffused shade from before the middle of the costa, bent outward along the cell; these and others, consisting of scarcely paler diffused streaky shading, are so ill-defined as to be scarcely recognisable in the general hoary and fuscous mixture of the coarse wing-clothing; cilia of a slightly brownish grey tinge, with hoary speckling. *Exp. al.* 26-28 mm. *Hindwings* and cilia pale bronzy brown. *Abdomen* bronzy brownish. *Legs* pale brownish, faintly sprinkled with fuscous on their outer side.

Type ♀ (5863 Wlsm. Det. 1908) US. Nat. Mus. [PT. (33649) Mus. Wlsm. BM.]

*Hab.* MEXICO: OAXACA: *Salina Cruz*, VII. 1906 (*W. Schaus*). Two specimens.

### 3. *Holcocera nephalia*, sp. n.

*Prosodica nephalia* Wlsm. Pr. US. Nat. Mus. 33 200 (1907) LN.

*Antennae* bifasciculate; basal joint not notched, widely clothed, a pecten beneath. *Palpi* cinereous, greyish brown externally. *Head* pale brownish cinereous. *Thorax* brownish cinereous, shading to greyish brown in front and on the tegulae. *Forewings* pale cinereous, speckled and shaded with greyish brown; a band of the pale ground-colour at about one-third is rectangulate outward on the cell, speckled with greyish brown, but not shaded as is the basal portion before it; at its outer edge the brown shading is considerably increased in intensity and is thence diffused and diluted outward, in it are two scarcely perceptible darker, almost fuscous, spots, one in the middle of the fold and one on the cell opposite to

the angle of the pale band; these are succeeded by a more conspicuous spot of the same colour lying transversely at the end of the cell, before which a slightly paler band crosses the wing, but is almost obliterated by the grey dusting which is continued to the apex; cilia brownish cinereous. *Exp. al.* 20–21 mm. *Hindwings* shining, brownish grey; cilia pale brownish cinereous. *Abdomen* pale brownish cinereous, transversely banded with darker scales. *Legs* brownish cinereous, inclining to ochreous; hind tarsi unspotted.

*Type* ♂ (65519) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.** [*PT.* (65520) US. Nat. Mus.]

*Hab.* GUATEMALA: Volcan de Agua, 8500–10,500 ft., 13. I. 1881 (*G. C. Champion*).  
Two specimens.

#### 4. *Holcocera hemiteles*, sp. n.

*Antennae* pale greyish cinereous. *Palpi*, terminal joint not more than half median; pale greyish cinereous, the outer side shaded with greyish brown, especially on the median joint. *Head* and *Thorax* pale greyish cinereous. *Forewings* pale cinereous, much speckled and shaded with greyish brown; a band of the pale ground-colour, at about one-third, descending scarcely outward from the costa, is angulate backward to the dorsum from a little above the fold, but is scarcely distinguishable from the base of the wing; the darker shading beyond it is less intense than in *nephalia*, and appears to be somewhat more broken-up, not only across the middle of the wing, but also in its much diffused and diluted continuation beyond; the first discal and plical spots are placed as in *nephalia*, the latter much suffused, but the transverse spot at the end of the cell is divided into two, and the lower one is preceded by another spot at the lower edge of the cell a little beyond it; the apical portion of the wing is much mottled with greyish brown shading, among which the pale ground-colour gives a dusted or speckled appearance which continues through the pale brownish cinereous cilia. *Exp. al.* 17–18 mm. *Hindwings* shining, pale greyish; cilia pale brownish cinereous. *Abdomen* slightly banded with alternate whitish cinereous and greyish brown rings. *Legs* brownish cinereous.

*Type* ♂ (65521) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.** [*PT.* (65523) US. Nat. Mus.]

*Hab.* GUATEMALA: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*).  
Four specimens.

Resembling *nephalia* Wlsm. in appearance, but the antennae are only minutely ciliate, not strongly bifasciculate as in that species.

#### 5. *Holcocera homochromatica*, sp. n. (Tab. V. fig. 19.)

*Antennae* hoary greyish. *Palpi* brownish grey, sprinkled with hoary scales, a paler ring around the apex of the median joint; terminal joint not more than half median. *Head* and *Thorax* hoary greyish. *Forewings* hoary greyish, sprinkled with greyish brown scales—sparsely at the base, somewhat more thickly on the apical half; a band of the same colour crosses the fold at two-fifths, concave on its inner side, ill-defined and gradually diluted externally; the first discal spot is obliterated in this dark band, but the usual two at the end of the cell are contiguous, one below the other, and a third ill-defined spot touches the margin about the tornus, slightly beyond the lower one; cilia brownish cinereous, sprinkled with hoary scales along their base. *Exp. al.* 14 mm. *Hindwings* shining, rather pale brownish grey; cilia pale brownish grey. *Abdomen* shining, pale brownish grey. *Legs* greyish brown externally, the ends of the tibiae and the extremities of the tarsal joints pale brownish cinereous.

*Type* ♀ (65535) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.**

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

Intermediate between *texanella* Wlsm. and *episcia* Wlsm., resembling the former in markings and the latter in colouring.

**Fam. 6. STENOMIDAE, Meyr.**

STENOMIDAE Meyr. Tr. Roy. Soc. S-Austral. 30 50 (1906). STENOMATIDAE Wlsm. Pr. US. Nat. Mus. 33 214-5 (1907).

**THIOSCELIS Meyr.**

Type: *Thioscelis directrix* Meyr. (Meyr. 1909).

THIOSCELIS Meyr. Tr. Ent. Soc. Lond. 1909 29-30 (1909).

**1. Thioscelis directrix Meyr.**

*Thioscelis directrix* Meyr. Tr. Ent. Soc. Lond. 1909 30 (1909)<sup>1</sup>.

Type ♂ Mus. Meyr.

*Hab.* AMERICA, C-S. Central America—COSTA RICA: Tuis, 1. VI. 1908 (*W. Schaus*). South America—PERU<sup>1</sup>: Pozuzo, 2500 ft.<sup>1</sup>; El Porvenir, 3000 ft.<sup>1</sup>.

[The specimen from Costa Rica is in the US. Nat. Mus., determined by Mr. Busck.]

**MOTHONICA, gen. nov.**

(μοθωνικός=impudent.)

Type: *Mothonica periapta* Wlsm. (Tab. V. fig. 20.)

*Antennae* (broken); basal joint somewhat enlarged. *Labial Palpi* long, recurved, with appressed scales; terminal joint as long as median, acute. *Maxillary Palpi* short, converging. *Haustellum* scaled at base. *Head* somewhat thickly clothed. *Thorax* smooth. *Forewings* rather narrow, elongate, costa slightly arched toward the base, apex angulate, termen sinuate, tornus rounded: *neuration* 12 veins; 8-9 stalked, to costa; rest separate, 7 to termen; 2-4 approximate, 3 nearer to 4 than to 2; 1 basally furcate. *Hindwings* 1+, termen somewhat oblique, tornus rounded: *neuration* 8 veins; 6-7 closely approximate towards base; 3-4 connate, 5 closely approximate to 4. *Abdomen* (missing). *Legs*: hind tibiae with long hairs above.

This genus is easily recognised by the stalking of FW: 8-9.

**1. Mothonica periapta, sp. n. (Tab. V. fig. 20.)**

*Antennae, Palpi, and Head* bone-white. *Thorax* bone-ochreous, with slight brownish fuscous sprinkling. *Forewings* bone-ochreous, sprinkled with brownish fuscous scales, which are chiefly distributed in horse-shoe form around the outer end of the cell, reverting to costa and dorsum at or before the middle and tending to radiate outward on the lines of *neuration*; an outwardly waved series of spots lies beyond this shade, angulate below the costa, bowed in the middle and sloped backward to the dorsum before the tornus; there are two strong discal spots, one before the middle, the other at the end, of the cell, with a plical spot nearer to the first; also a series of six well-marked spots along the termen, at the base of the bone-ochreous cilia which are tipped with whitish. *Exp. al.* 19 mm. *Hindwings* bone-whitish, with a slight brownish tinge; cilia considerably darker along their basal half, and, as in the forewings, tipped with whitish. *Abdomen* (missing). *Legs* pale bone-ochreous.

Type ♀ (66076) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Rio Sucio (*H. Rogers*). Unique.

BIOL. CENTR.-AMER., Heter., Vol. IV., May 1912.

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## AEDEMOSES, gen. n.

(αιδήμων=coy; σής=a moth.)

Type: *Aedemoses haesitans* Wlsm. (Tab. V. fig. 21.)

*Antennae* ♀ minutely ciliate toward the apex. *Labial Palpi* smooth, but closely clothed; terminal joint acuminate, not longer than median. *Maxillary Palpi* short. *Haustellum* scaled at base. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* oblong, rounded at the apex; termen slightly oblique, rounded, the costa a little convex: *neuration* 11 veins; 2-3 coincident, rest separate; discoidal weak between 4 and 6; 1 basally furcate. *Hindwings* with the apex obtusely rounded, termen obliquely rounded: *neuration* 7 veins; 3-4 coincident, stalked with 5; 6-7 stalked; discoidal weak between 4 and 6. *Abdomen* smooth. *Legs* (posterior pair missing).

1. *Aedemoses haesitans*, sp. n. (Tab. V. fig. 21.)

*Antennae* and *Palpi* pale fawn, the latter tipped with rust-brown. *Head* and *Thorax* pale fawn. *Forewings* pale fawn-ochreous, with an oblique fawn-brown line from the commencement of the costal cilia, descending straight to the tornus; a minute spot of the same at the end of the cell, another on the cell half-way between this and the base, a third in the middle of the fold; from the plical spot a line of brown scales descends obliquely outward to the dorsum and is diffused along it nearly to the tornus, but not conspicuously; there are a few small brown dots around the apex and termen at the base of the pale fawn cilia. *Exp. al.* 12 mm. *Hindwings* fawn-brownish; cilia pale fawn. *Abdomen* fawn. *Legs* pale fawn-ochreous.

Type ♀ (65961) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: DURANGO: Presidio (A. Forrer). Unique.

A small and inconspicuous species, but easily recognised by the oblique transverse line which cuts off the apical area.

## CATARATA, gen. n.

(κατήρατος=abominable.)

Type: *Catarata lepisma* Wlsm.

*Antennae*  $\frac{3}{4}$ , ♀ simple. *Labial Palpi* long, recurved, with appressed scales; terminal joint shorter than median. *Maxillary Palpi* short, converging. *Haustellum* well-developed. *Head* loosely scaled. *Thorax* smooth. *Forewings* narrow, elongate, costa slightly arched at base, apex rounded, termen somewhat oblique, tornus evenly rounded: *neuration* 12 veins; 2-3 stalked, 4 out of their stalk; rest separate, 7 to apex; lower fork of 1 subobsolete. *Hindwings* 1+, termen oblique, tornus rounded: *neuration* 7 veins; 3-4 coincident, 5 approximate; discoidal subobsolete; 6-7 stalked. *Abdomen* moderate. *Legs*: hind tibiae hairy above.

1. *Catarata lepisma*, sp. n.

*Antennae* smoky, dull brownish ochreous. *Palpi* whitish ochreous, dusted with fuscous, a fuscous band before the apex of the terminal joint. *Head* and *Thorax* whitish ochreous, shaded above with smoky fuscous. *Forewings* whitish ochreous, much sprinkled and smeared with smoky fuscous; in addition to some general irroration, a costal shade, extending from one-fifth to beyond the middle, is followed by another costal patch, or shade, before the apex, from which arises, on its outer side, a series of fuscous spots, continued around the apex and termen, and from its lower edge a second series, more or less confluent, bowed outward and reverting to the dorsum about the tornus; there are two dark shade-patches also on the dorsum, one before and one beyond the middle, other scattered dark scaling extending across the



cell; cilia whitish ochreous, shaded along their base. *Exp. al.* 15–16 mm. *Hindwings* rather shining, greyish fuscous; cilia rather paler. *Abdomen* smoky ochreous. *Legs* greyish, the hind tarsi spotted with ochreous.

*Type* ♀ (5874); *PT.* (5875 Wlsm. Det. 1908) US. Nat. Mus. [*PTT.* (33926–7) Mus. Wlsm. BM.]

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Four specimens.

The four females vary somewhat in the extent and diffusion of the fuscous clouding.

## 2. *Catarata stenota*, sp. n.

*Antennae* stone-grey. *Palpi* stone-grey, sprinkled and tipped with fuscous. *Head* stone-grey. *Thorax* stone-whitish. *Forewings* stone-whitish, profusely sprinkled and shaded with fuscous, a blackish spot of raised scales on the flexus, above which the dark fuscous colouring is slightly concentrated in an ill-defined half-fascia, reaching from the costa to the fold, and produced outward along the costa to an even more concentrated patch of the same colour, connecting the costa with the outer end of the cell, and thence again diffused upward to above the apex; a waved line parallel with the termen is faintly indicated, the marginal spots on the termen and the basal half of the otherwise stone-white cilia being somewhat darker than the wing-suffusion; briefly, the wing-surface has an irregular and confusedly mottled appearance. *Exp. al.* 16 mm. *Hindwings* pale brownish grey, with a brownish shade along the basal half of the hoary white cilia. *Abdomen* pale brownish fuscous. *Legs* stone-whitish, with faint fuscous hind tarsal annulations.

*Type* ♂ (66085) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66086) US. Nat. Mus.]

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1878–9 (*G. C. Champion*). Two specimens, both in very poor condition, but distinct.

## ATHLETA, gen. n.

(ἀθλητής = a champion.)

*Type*: *Athleta trisecta* Wlms. (Tab. V. fig. 24.)

*Antennae*  $\frac{2}{3}$ , basal joint somewhat enlarged, flattened, without pecten. *Labial Palpi* long, recurved, with appressed scaling; terminal joint acute, rather shorter than median. *Maxillary Palpi* short, converging. *Haustellum* well-developed. *Head* densely scaled above, face smooth. *Thorax* smooth. *Forewings* elongate, moderately straight, costa somewhat arched at base, apex rounded: *neuration* 12 veins; all separate, 7 to costa; 3 nearer to 4 than to 2. *Hindwings* 1+, termen slightly oblique, tornus rounded: *neuration* 7 veins; 3–4 coincident, 5 approximate; discoidal subobsolete; 6–7 stalked. *Abdomen* moderate. *Legs*: hind tibiae hairy above.

This genus agrees with *Aedemoses* Wlsm. and *Catarata* Wlsm. in having HW: 3–4 coincident; the former differs in the coincidence of FW: 2–3, while the latter has FW: 2–3 stalked.

## 1. *Athleta trisecta*, sp. n. (Tab. V. fig. 24.)

*Antennae* mouse-grey. *Palpi* white, the median joint with a patch of mouse-grey at the base above; terminal joint with a ring of the same at its base, and a stain towards its apex beneath. *Head* white, a pale brownish-grey tuft above posteriorly. *Thorax* dark mouse-grey, the bases of the tegulae whitish. *Forewings* shining, silvery white, with a broad dark mouse-grey patch along the dorsum, somewhat dilated from the base below the fold, crossing the middle of the fold and abruptly ending with a convex margin two-thirds of the distance between the cell and the termen, where it extends fully as high as the upper edge of the cell; a slender line continues the curve of its outer margin to the costa; this patch is

twice interrupted by the white ground-colour, first at about one-third, secondly beyond the middle; after each interruption a curved line of the dark mouse-grey scales is produced backward from the inner edge of the patch beyond, the first of these lines sometimes forming a semi-detached streak, nearly reaching to the base of the wing; around the termen and apex is a slight clouding of dark mouse-grey scales forming a series of connected spots between the veins; cilia silvery white. *Exp. al.* 18 mm. *Hindwings* pale brownish grey; cilia white, touched with brownish at the apex. *Abdomen* shining, whitish cinereous.

*Legs* silvery white, the hind tarsi distinctly yellowish beneath.

*Type* ♀ (66082, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*). [PT. (66083) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: *Teapa*, II–III. (*H. H. Smith*). GUATEMALA: ALTA VERA PAZ: *Cahabon*, II. 1880 (*G. C. Champion*). Three specimens.

In general appearance this much resembles *Stenoma binubila* Z., but it is much smaller, and the two interruptions of the dorsal patch are less distinct than the single one which occurs in that species; the neuration of the hindwings will at once distinguish these species.

## 2. *Athleta cenotes*, sp. n. (Tab. V. fig. 23.)

*Antennae* ♂ biciliate 1+; very pale brownish ochreous. *Palpi* whitish ochreous, the median joint smeared with fawn-brown toward the base along its upper half externally; terminal joint with a brown spot at the base, and with its inner side sprinkled with some brown scaling. *Head* whitish ochreous, tinged with fawn-brown above. *Thorax* fawn-brown, the ends of the tegulae whitish ochreous. *Forewings* whitish ochreous, shaded with pale fawn-brown, which occupies the greater part of the wing-surface, reaching from the middle of the cell to the dorsum and nearly to the tornus, but broken up beyond the cell into slender lines running along the veins to the apex and termen, with more or less brown dusting between them; along the upper edge of the cell is a still darker brown streak, narrowly traceable to the extreme base of the costa, while above it, toward the middle of the wing, are three or four irregular spots of the same colour, the first of which, at scarcely more than one-third from the base, is the larger and more conspicuous; the costa is narrowly pale brownish ochreous throughout; a very indistinct outwardly curved fawn band crosses the veins before the termen, which is also narrowly marked with the same colour; cilia whitish ochreous, touched with some brownish shading. *Exp. al.* 17.5 mm. *Hindwings* whitish ochreous, slightly more ochreous toward the apex; a strong ochreous hair-pencil in the ♂, arising at the base, is concealed in the fold on the upper side along vein 1<sup>b</sup>, the line of this pocket being also coarsely scaled beneath; cilia very pale ochreous. *Abdomen* whitish ochreous. *Legs* whitish ochreous, the hind tarsal joints more distinctly ochreous.

*Type* ♂ (66081, *Panima*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (6178 Drnt. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C–I. Central America—GUATEMALA: ALTA VERA PAZ: *Panima*, 1800 ft., 8–15. X. 1879 (*G. C. Champion*). West Indies—TRINIDAD (*W. Schaus*). Three specimens.

## 3. *Athleta ptycta*, sp. n. (Tab. V. fig. 22.)

*Antennae* whitish fawn. *Palpi* whitish fawn, the basal half of the median joint shaded above with umber-brown; the terminal joint spotted at the base and slightly shaded toward the apex with umber-brown. *Head* and *Thorax* whitish fawn, the latter shaded with umber-brown. *Forewings* whitish fawn, much shaded and streaked with umber-brown, especially on the outer half and along the middle of the dorsum; a group of short umber-brown streaks lies on the upper half of the wing near the base, others less conspicuous along the fold, and an obliquely placed group of smaller streaks below the middle of the costa, leading in the direction of a small spot of the same colour at the end of the cell; a rather strong shade of umber-brown, before the apex, is produced downward in a line parallel with the termen to the tornus, the termen itself being also strongly spotted with an even darker shade of the same colour;

cilia fawn-brown, with a pale line along their base; under side bone-white, with a brownish tinge. *Exp. al.* 21–23 mm. *Hindwings* bone-white, shaded with umber-brown toward the apex; ♂ with a fold below the cell, containing a pencil of long black cubital hairs; cilia slightly tinged with ochreous; under side bone-white, with a brownish tinge. *Abdomen* bone-white. *Legs* bone-white, hind tarsal joints ochreous beneath.

*Type* ♂ (66078, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66079) US. Nat. Mus.; (238 Wlsm. Det. 1892) Mus. Stgr.]

*Hab.* AMERICA, C-S. **Central America** — GUATEMALA: BAJA VERA PAZ: *San Gerónimo*, 1878–9 (*G. C. Champion*)—PANAMA: CHIRIQUI: *Volcan de Chiriqui*, 2000–3000 ft., 1881 (*G. C. Champion*). **South America** — ECUADOR (*Mus. Stgr.*). Four specimens.

### ZETESIMA, gen. n.

(ζητήσιμος=to be searched.)

*Type*: *Zetesima lasia* Wlsm. (Tab. V. fig. 25.)

*Antennae* ♂ biciliate 1. *Labial Palpi* long, porrect, median joint slightly recurved at its apex, smooth; terminal joint shorter than median, recurved, clothed to beyond its middle with slightly raised scales. *Maxillary Palpi* short. *Haustellum* present. *Head* somewhat roughly scaled above. *Thorax* smooth. *Forewings* narrow, elongate, obtuse, with straightened margins and rounded apex and tornus: *neuration* 12 veins; 2–3 stalked, 4 out of their stalk and 5 connate with it; rest separate, 7 to costa. *Hindwings* 1+, costa slightly depressed, apex rounded, termen very oblique, slightly sinuate: *neuration* 8 veins; 3–4 long-stalked; 5 approximate to 3+4; 6–7 stalked. *Abdomen* moderate. *Legs*: hind tibiae hairy above.

#### 1. *Zetesima lasia*, sp. n. (Tab. V. fig. 25.)

*Antennae* pale fawn-ochreous. *Palpi* fawn-ochreous, the terminal joint clothed to beyond its middle with slightly raised fawn-brown scales. *Head* pale fawn-ochreous. *Thorax* fawn-ochreous. *Forewings* with a strong costal fold in the ♂, containing a large expansible hair-tuft; fawn-ochreous, streaked and shaded with greyish fuscous, of which there is a broken line along the costa, becoming continuous along the termen; a less conspicuous line below the costa, and a third, darker and more conspicuous, short line along the upper edge of the cell, both the latter fading into a paler, more greyish, suffusion beyond the cell; some indistinct streaks and spots occur also on the cell, one at the base of the dorsum, one about its middle, and one at the tornus, throwing out some almost blackish scales through the otherwise pale fawn-ochreous cilia. *Exp. al.* 12.5 mm. *Hindwings* greyish fuscous, a slender subochreous line at the base of the fuscous cilia is rather strengthened toward the apex. *Abdomen* fuscous; anal tuft ochreous. *Legs* ochreous.

*Type* ♂ (5976 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA (*W. Schaus*). Unique.

### STENOMA Z.

=LOXOTOMA Z.; =AUXOCROSSA Z.; =MESOPTYCHA Z.; =ANTAEOTRICHIA Z.; =†BRACHILOMA Clms. (†BRACHYLOMA Chmb.; =§HARPALYCE Chmb., †IDE Chmb.); =DIASTOMA Mschl.; ANADASMUS Wlsm.; =\*CRYPOLECHIA (p.) Z., etc.

*Type* 1: *Stenoma litura* Z. (Z. 1877; Wlsm. 1891).

STENOMA Z. *Isis* 1839 195 no. 25 sp. 1–3 (1839): *Linn. Ent.* 9 354 (1854). CRYPTOLECHIA Z. (4. STENOMA Z.) Z. *Hor. Soc. Ent. Ross.* 13 258, 260–4 sp. 54–8 (1877). STENOMA Wlsm. *US. Dp. Agr. (Div. Ent.) Ins. Life* 2 150, 152–4 (1889): *Tr. Ent. Soc. Lond.* 1891 101

(1891); Dyar Bull. US. Nat. Mus. **52** 518 sp. 5834-9 (1902); Meyr. Tr. Ent. Soc. Lond. **1909** 31-4 (1909); Busck Pr. Ent. Soc. Wash. **12** 80 (1910); Pr. US. Nat. Mus. **40** 212-23 Pl. **8-9** (1911); Meyr. Tr. Ent. Soc. Lond. **1911** 711-17 (1912).  
 [= \**CRYPTOLECHIA* (p.) Z. Linn. Ent. **9** 353-82 sp. 5-26 Pf. **3** 14-21 (1854); **10** 145-68 Pf. **1** 4-8 (1855); Wkr. Cat. Lp. BM. **29** 709-72 no. 48 sp. 1-162 (1864); **30** 1035-7 (1864); **35** 1834 (1866); Z. Verh. ZB. Ges. Wien. **23**:**1873** 238-47 Pf. **3** 12 (1873); F. & R. Reise Nov. Zool. Lp. **2** Pf. **138** 35-8, 41, 51, 64-5, 67, **139** 13, 24, 56 (1875); Z. Hor. Soc. Ent. Ross. **13** 258-305 sp. 1-83 Pf. **3** 76-88 (1877); Btlr. Cist. Ent. **2** 163-4, 187-93 sp. 1-26 (1877); Chmb. Bull. US. GG. Surv. **4** 84-6, 137 (1878); Wlsm. Tr. Am. Ent. Soc. **10** 175-7 (1882); Berg An. Soc. Ci. Argent. **19** 280-2 (1885); Riley, Smith's List Lp. Bor-Am. **98** sp. 5216-24 (1891); Stgr. Ergbn. Hamb. Magalh. Sammelr. Lp. **4** 111-12 Pf. **1** 10 (1899); Dgn. Ann. Soc. Ent. Belg. **49** 88-9 (1905).]

Type 2: *Loxotoma elegans* Z. (Z. 1854).

LOXOTOMA Z. Linn. Ent. **9** 354, 383-5 sp. 1 Pf. **3** 22-3 (1854); Hor. Soc. Ent. Ross. **13** 258 (1877).

Type 3: *Auxocrossa hopfferi* Z. (Z. 1854).

AUXOCROSSA Z. Linn. Ent. **9** 354-5, 385-7 sp. 1 Pf. **3** 24-5 (1854); Hor. Soc. Ent. Ross. **13** 258, 328-30 Pf. **4** 103 (1877). †*AUXOCRASSA* Wlsm. Tr. Ent. Soc. Lond. **1881** 254 (1881).

Type 4: *Mesoptycha nictitans* Z. (Z. 1854).

MESOPTYCHA Z. Linn. Ent. **9** 355, 387-90 sp. 1 Pf. **3** 26-8 (1854); Hor. Soc. Ent. Ross. **13** 258 (1877); Wlsm. Tr. Ent. Soc. Lond. **1881** 254 (1881).

Type 5: *Pyralis griseana* F. (= \**walchiana* Z.; Z. 1854).

ANTAEOTRICHIA Z. Linn. Ent. **9** 355, 390-9 sp. 1-5 Pf. **3** 29-33 (1854); Wkr. Cat. Lp. BM. **29** 773-4 no. 51 sp. 1-6 (1864); Z. Hor. Soc. Ent. Ross. **13** 258, 305-26 sp. 1-14 Pf. **3** 89-4 101 (1877); [†*ANTOETRICHIA* Wlsm. Tr. Ent. Soc. Lond. **1881** 254 (1881)]; Wlsm. Tr. Ent. Soc. Lond. **1891** 101 (1891); Wlsm. & Drnt. Merton Rules 12 no. 34 (1896); Wlsm. Pr. Z. Soc. Lond. **1897** 98-9 no. 32 sp. 106-9 (1897); Meyr. Tr. Ent. Soc. Lond. **1909** 30-1 (1909); **1911** 708-11 (1912).

Type 6: *Brachiloma unipunctella* Clms. (Clms. 1863; Wlsm. 1891).

BRACHYLOMA Clms. = †*BRACHILOMA* Clms. Pr. Ent. Soc. Phil. **2** 126 (1863); Clms-Stn. Tin. N-Am. pp. xi, 232 (1872). †*BRACHYLOMA* Chmb. Bull. US. GG. Surv. **4** 132 (1878). §*HARFALYCH* Chmb. Can. Ent. **6** 234-5 (1874); Bull. US. GG. Surv. **3** 122 (1877); **4** 150 (1878). *IDE* Chmb. Jr. Cin. Soc. NH. **2** 180, 198, tf. 201 9 (1880); Wlsm. US. Dp. Agr. (Div. Ent.) Ins. Life **2** 150, 155 (1889); Tr. Ent. Soc. Lond. **1891** 113 Pf. **5** 50, **7** 85 (1891); Dyar Bull. US. Nat. Mus. **52** 519 sp. 5840-2 (1902). *BRACHILOMA* Dyar Bull. US. Nat. Mus. **52** 544 sp. 6180 (1902); Busck Pr. Ent. Soc. Wash. **5** 214 (1903). *BRACHYLOMA* Busck Pr. Ent. Soc. Wash. **10** 111-12 (1908).

Type 7: *Diastoma nubilella* Mschlr. (Mschlr. 1882).

DIASTOMA Mschlr. Verz. ZB. Ges. Wien **31**:**1881** 439-40 sp. 145 Pf. **18** 48 (1882); Wlsm. Pr. Z. Soc. Lond. **1891** 524, 546 no. 48 sp. 89 (1892); **1897** 100 no. 33 sp. 110 (1897).

Type 8: *Cryptolechia sororia* Z. (Wlsm. 1897).

ANADASMUS Wlsm. Pr. Z. Soc. Lond. **1897** 100-1 no. 34 sp. 111-12 (1897).

### 1. *Stenoma zelotes*, sp. n.

*Antennae* biciliate 3, the basal joint much widened, at a distance from it equal to its own length is a small pit-like depression in the ♂; whitish cinereous, the basal joint shaded above with fawn-grey. *Palpi* smooth, recurved, the terminal joint shorter than the median; whitish cinereous, a slightly darker ring around the extreme base of the terminal joint. *Head* fawn-grey; face whitish. *Thorax* fawn-grey. *Forewings* elongate, more than four times as long as wide, the costa straight beyond the base; apex slightly depressed, rounded, termen obliquely convex; dull fawn-grey, the costal third whitish, the white mixing with the darker dorsal colouring beyond the end of the cell to the termen; from the middle of the costa an outwardly oblique line of diffused fawn-brown scales runs to a small fuscous spot at the end of the cell; beyond it a similar parallel line is recurved to the dorsum before the tornus, after reaching the point opposite to the middle of the termen; a small elongate fuscous spot, at one-fourth from the base, is placed on the upper edge of the cell, and a series of similar but smaller spots follows the margin beyond the outwardly curved second costal line, reaching to the tornus; cilia whitish along their middle, fawn-brownish at their base and outer half. *Exp. al.* 15–20 mm. *Hindwings* without costal tuft above in ♂, nearly twice as broad as the forewings; very pale brownish grey; cilia shining, pale cinereous, a slight shade-line running through them near their base. *Abdomen* shining, brownish grey. *Legs* whitish cinereous, the hind tibiae shortly fringed above.

*Type* ♂ (66087); ♀ (66088) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66090, 66092, 66096–7) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Twelve specimens.

### 2. *Stenoma ceratistes*, sp. n.

*Antennae* whitish cinereous. *Palpi* whitish cinereous. *Head* very pale fawn-brownish above; face whitish. *Thorax* pale fawn-grey, with a slight brownish tinge. *Forewings* pale fawn-grey, with a slight brownish tinge, the costal third dirty whitish, widening outwardly to the middle of the termen, but traversed by diffused lines of pale fawn-brownish scales, following the neuration beyond the end of the cell; at the end of the cell is a small brownish fuscous spot, a narrow elongate spot of the same colour placed in the middle of the fold, and a faint indication of two or three brownish fuscous dots on the lower part of the termen; cilia whitish above the middle, very pale fawn-brownish below the middle of the termen. *Exp. al.* 19–21 mm. *Hindwings* very pale brownish grey; a tuft of long ochreous hair-scales near the base of the costa on the upper side in the ♂. *Abdomen* pale brownish grey. *Legs* whitish cinereous.

*Type* ♂ (66109); ♀ (66110) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66113–14, 66116–17) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Ten specimens.

### 3. *Stenoma demotica*, sp. n.

*Antennae* brownish grey. *Palpi* bone-whitish, a brownish grey streak along the outer side of the median joint. *Head* and *Thorax* brownish grey; face whitish. *Forewings* narrow, elongate, tapering outwards; dull bone-whitish, the costa very narrowly clean bone-white throughout, the remainder of the wing more or less suffused and speckled with brownish grey, the dorsal half more strongly suffused than the costal, and more widely towards the base than to the termen; crossing the wing are three lines of still darker brownish fuscous spots (more or less coalescing into a continuous shade in the first two), of these, the first commences indistinctly on the costa at about one-sixth, and descending obliquely outward to the dorsum about the middle includes a discal spot at the upper edge of the cell and a plical spot beneath it; the second, commencing at about the middle of the costa, includes a single strong spot at the end of the cell and expands into a diffuse shade to the dorsum, there coalescing with the lower extremity of the third line which is obliquely bowed outward beyond the cell half-way to the termen; a line of seven or



eight blackish dots extends around the apex and termen before the shining pale brownish grey cilia. *Exp. al.* 24 mm. *Hindwings* broad, evenly rounded, the apex obtuse but scarcely depressed; grey, with a slight rosy tinge; cilia shining, bone-whitish, a slender shade-line running through them near their base. *Abdomen* grey. *Legs* bone-whitish.

*Type* ♀ (66099, *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66100) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: *Amula*, 6000 ft., VIII. (*H. H. Smith*); GUATEMALA: *Panajachel*, 5000 ft., 30. XII. 1880 (*G. C. Champion*). Two specimens.

#### 4. *Stenoma phaula*, sp. n. (Tab. V. fig. 26.)

*Antennae* pale brownish grey. *Palpi* pale brownish ochreous, the median joint smeared externally with brown to its middle, with an annulus of the same near the apex; terminal joint also smeared with brownish. *Head* pale brownish ochreous. *Thorax* greyish brown. *Forewings* elongate, subovate, the costa arched towards the base, apex and termen evenly rounded; very pale brownish ochreous, smeared on the dorsal half with brownish grey, with three oblique transverse broken lines of darker greyish brown, slightly waved in their course, but not angulated or bowed outward (as in several species of different genera extremely similar in colouring and appearance); the first line, starting from the costa at one-fifth reaches the dorsum scarcely before the middle, absorbing the first plical and discal spots if any existed; the second line, from the middle of the costa to the dorsum before the tornus, leaving in its course the outer discal spot somewhat distinct; the third line, half-way between the second and the apex, slightly reverting toward the tornus on its lower half and followed by a series of seven dark marginal spots before the pale brownish ochreous cilia. *Exp. al.* 23 mm. *Hindwings* and cilia brownish grey. *Abdomen* brownish grey. *Legs* very pale brownish grey.

*Type* ♀ (66119) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: *Panima*, 1800 ft., 8-15. X. 1879 (*G. C. Champion*). Unique.

#### 5. *Stenoma plurima*, sp. n. (Tab. V. fig. 27.)

*Antennae* argillaceous greyish. *Palpi* argillaceous, marked with brownish fuscous, the median joint clouded on its basal half, with a band before its apex; the terminal joint has a narrow band at its base and a wider one before its apex. *Head* and *Thorax* greyish fuscous; face paler. *Forewings* pale argillaceous greyish, with brownish fuscous spots and some sprinkling of brownish fuscous, especially along the dorsum and above the tornus; the first spot is at the base of the costa, and is produced in a short blunt streak along the upper edge of the cell; beyond is a small costal spot at one-fourth, a larger spot at the middle, and another at the commencement of the costal cilia, a narrow pale line separating these from the actual margin; on the cell is an elongate spot before the middle, and a rounded spot at the end of the cell, another lying in the fold a little beyond the first, with some indication of another spot half-way between the plical and the dorsum, a dorsal spot before the tornus is also indicated; along the evenly rounded apex and termen is a series of smaller spots before the rather shining pale cinereous cilia. *Exp. al.* 19 mm. *Hindwings* and cilia greyish fuscous. *Abdomen* greyish fuscous. *Legs* whitish.

*Type* ♀ (66120) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: *Cubilguitz*, 1050 ft., III. 1880 (*G. C. Champion*). Unique.

#### 6. *Stenoma epicta*, sp. n. (Tab. V. fig. 28.)

*Antennae* pale greyish. *Palpi* greyish, whiter on their inner sides. *Head* and *Thorax* white. *Forewings* elongate, of even width, apex rounded, termen obliquely convex; rather shining, white, with pale grey shading, a strong brown patch near the base of the dorsum, and a dark brown spot at the end of the cell; the pale olivaceous grey shading consists of a broad band along the dorsum, crossing the outer end

of the fold, curved upward around the end of the cell, and attenuate backward to the costa, at two-thirds from the base, a costal shade, commencing at the base, extending to one-third and thence deflected obliquely outward to the fold, and an apical shade extending from the costa along the termen nearly to the tornus, and covering the cilia, the curved white transverse band which separates it from the antecedent grey shade being clearly defined. *Exp. al.* 14 mm. *Hindwings* and cilia pale greyish. *Abdomen* greyish. *Legs* yellowish white.

*Type* ♀ (66121) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (H. H. Smith). Unique.

### 7. *Stenoma prosora*, sp. n. (Tab. V. fig. 29.)

*Antennae* pale brownish fuscous. *Palpi* bone-white, slightly smeared with brownish fuscous. *Head* pale brownish fuscous; face bone-white. *Thorax* dark brownish fuscous. *Forewings* bone-whitish, much suffused and transversely barred obliquely with broken brownish fuscous lines; the brownish fuscous suffusion is much more strongly shown on the dorsal than on the costal portion of the wing, but there is no clear definition of its extent, where the first two of the three transverse broken lines cross this dark shade they greatly intensify it, adding to it a slight purplish gloss; the first of these, commencing on the costa near the base, is partially reduplicated on its outer half, a branch to the extreme base being obscurely indicated, it is angulated inward on the cell, and descends to the dorsum, before the middle, in a generally oblique direction; the second commences before the middle of the costa, and after reaching the upper angle of the cell descends straight to the dorsum, somewhat dilated outward on its lower half; the third, from beyond the middle of the costa, curves outward parallel to the line of the apex and termen, reverting to the dorsum before the tornus, a similar line following the margin itself; the costa is very narrowly pale bone throughout, this line being produced through the basal half of the cilia, their outer half being pale bone-white. *Exp. al.* 23 mm. *Hindwings* brownish grey; cilia slightly paler. *Abdomen* pale brownish grey above, whitish at the sides. *Legs* bone-white.

*Type* ♀ (66122) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft. (G. C. Champion). Unique.

### 8. *Stenoma comosa*, sp. n. (Tab. V. fig. 30.)

*Antennae* biciliate  $1\frac{1}{2}$ ; fawn-grey. *Palpi* white, a brown streak on the upper side of the median joint extending along its basal half. *Head* fawn-grey above; face white. *Thorax* fawn-grey, with a lateral tuft of fawn-ochreous hair-scales beneath. *Forewings* with the costa arched towards the base, straight beyond, apex obtuse, termen obliquely convex; shining, white, a narrow, delicate, shade of fawn-ochreous along the costa, a stronger shade of fawn-grey along the dorsum, occupying the space below the fold, and slightly overlapping the fold at its outer half; in this broad fawn-grey shade are two conspicuous brown dorsal blotches—the first quadrate, scarcely before the middle, some scattered scales of the same colour extending obliquely inward on to the cell; the second, somewhat triangular, extending to the tornus, sending out a slender, fluctuate line of the same colour obliquely inward across the cell, ending below the middle of the costa; a further irregular line of brown spots curves upward from the tornus and reverts to the costa at the commencement of the costal cilia, six brown marginal spots extend along the termen, a small elongate spot occurring near the base of the wing a little below the fold; cilia shining white, becoming fawn-grey at the tornus. *Exp. al.* 22 mm. *Hindwings* broader than the forewings, the costa slightly raised before the middle, the termen scarcely sinuate; pale brownish grey, the outer half of the cilia whitish cinereous. *Abdomen* fawn-grey above, whitish beneath. *Legs* shining, white beneath, bone-white above; the posterior femora with a thick tuft of brownish ochreous hair-scales above.

*Type* ♂ (66124) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (H. H. Smith). Unique.

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### 9. *Stenoma ocellifer*, sp. n.

*Antennae* biciliate  $1\frac{1}{2}$ ; dirty whitish. *Palpi* white, with a brown streak above the base, extending to the middle of the median joint. *Head* white. *Thorax* dirty white. *Forewings* with the costa slightly arched, apex rounded, termen obliquely convex; rather shining, white, with a dark olive-brown spot in the fold at about one-fourth; a strong bronzy olive ocelloid dorsal spot with white centre at one-third, and a sagittate dorsal spot of the same colour at two-thirds, there is also a faint indication of an olivaceous spot a little beyond the end of the cell, preceded by another near its upper angle, and two or three within the margin near the apex of the wing, these are all very faint; cilia white, containing an olivaceous patch at the tornus. *Exp. al.* 20–21 mm. *Hindwings* broad, the costa much arched, with a long fringe of upstanding scales on the basal half, appearing fawn-brownish beneath; the costa and flexus broadly whitish, a short upwardly curved fringe of brownish ochreous scales on the cell at about one-third from the base; cilia whitish, shaded with brownish grey along the middle of the sinuate margin. *Abdomen* brownish grey, with lateral tufts of dark olive-brown on the terminal segment. *Legs* dirty whitish.

*Type* ♂ (66179) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66180) US. Nat. Mus.]

*Hab.* Central America—MEXICO: DURANGO (*A. Forrer*)—COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—GUATEMALA: San Gerónimo, 2800 ft., 1879 (*G. C. Champion*); Cerro Zunil, 4000–5000 ft., VIII–IX. 1880 (*G. C. Champion*). Four specimens.

### 10. *Stenoma fumifica*, sp. n. (Tab. V. fig. 31.)

*Antennae* brownish fuscous. *Palpi* dirty whitish, smoky at the base. *Head* greyish fuscous; face white. *Thorax* dark purplish fuscous. *Forewings* white, with a somewhat clearly defined dark purplish fuscous shade along the dorsal half, interrupted before and behind the middle by patches of greyish fuscous suffusion, beyond the outer of which a curved shade of the darker colour arises from the tornus reaching to two-thirds of the width of the wing; a dark purplish fuscous spot at the end of the cell touches the upper edge of the broad dorsal shade; a series of similar, but smaller spots lies around the apex and termen; cilia white about the apex, shading to pale greyish fuscous about the tornus. *Exp. al.* 24 mm. *Hindwings* greyish fuscous; cilia white about the apex, shading to pale greyish fuscous towards the flexus. *Abdomen* brownish ochreous. *Legs* whitish, touched with brownish ochreous on the tibiae externally.

*Type* ♀ (66125) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

### 11. *Stenoma machetes*, sp. n.

*Antennae* bone-grey. *Palpi* white, shaded with bone-grey along their outer sides. *Head* and *Thorax* white. *Forewings* rather shining, white, with wavy mottled shades of bone-grey, and a strong greyish fuscous spot at the flexus, in which the scales, projecting over the margin, are in part white, but outwardly tawny purplish; the first indistinct mottled shade-line, commencing at the base of the costa, is bent downward at one-fourth, and merged in the more generally diffused bone-grey mottling along and below the fold; beyond the base the costal area is unshaded, but below it, beyond the middle, are two, more or less confluent, obliquely sinuate shade-lines, directed to the outer end of the fold; these are followed before the termen by two comparatively straight, but slightly outward bowed, parallel shade-lines, the first continuous, the second tending to become broken into spots; there is a rather distinct bone-grey marginal line around the apex and termen, followed by a series of about seven dark fuscous spots in the white cilia, which are also tipped with bone-grey. *Exp. al.* 27–30 mm. *Hindwings* brown-grey; cilia white, with a narrow shade-line near their base. *Abdomen* bone-grey. *Legs* white, hind tarsi shaded with bone-grey.

*Type* ♂ (66126) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66127) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

Closely allied to 5834 *schlägeri* Z.

12. *Stenoma hemiscia*, sp. n.

*Antennae* ♂ biciliate 1; smoky greyish fuscous. *Palpi* white, partly suffused with greyish fuscous on the outer side of the median joint. *Head* and *Thorax* smoky greyish fuscous; face white. *Forewings* rather shining, white, with a smoky greyish fuscous suffusion along the dorsal half, dilated upward to the apex and mottled throughout with a darker shade of the same colour; this darker mottling is reproduced on the whiter costal half in a costal spot at one-third, almost connected obliquely by a paler shade to the upper edge of the cell, in a paler, outwardly oblique, shade from the middle of the costa to the upper angle of the cell, and in another costal spot a little beyond it, on the outer side of which some white scaling is continued in an outwardly curved line through the fuscous suffusion to the tornus; there is no clear definition of the suffused portion of the wing, the white ground-colour blending with it and to some extent contributing to its mottled appearance; cilia white, with smoky fuscous marginal spots along their base; about the flexus are some strong projecting scales which, a little way along the dorsum, are tinged with rust-brown. *Exp. al.* 26 mm. *Hindwings* and base of cilia pale brownish fuscous, outer two-thirds of cilia, except near the abdomen, white.

*Type* ♂ (66128, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66129) US. Nat. Mus.]

*Hab.* GUATEMALA: *San Gerónimo*, 1879 (*G. C. Champion*); *Cerro Zunil*, 4000–5000 ft., VIII–IX. 1880 (*G. C. Champion*). Two specimens.

Closely allied to *semicinerea* Z., but with the markings more mottled and blurred: it is undoubtedly distinct.

13. *Stenoma semicinerea* Z.

*Antaeotricha semicinerea* Z. Hor. Soc. Ent. Ross. 13 312–3 sp. 6 Pf. 3·93 (1877)<sup>1</sup>.

*Type* ♂ Mus. Stgr.

*Hab.* Central America—GUATEMALA: *San Gerónimo*, 1879 (*G. C. Champion*)—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup> (*Ribbe*).

14. *Stenoma frontalis* Z.

*Cryptolechia frontalis* Z. Linn. Ent. 10 159–61 sp. 17<sup>b</sup> Pf. 1·7 (1855)<sup>1</sup>; Wkr. Cat. Lp. BM. 29 710 sp. 6 (1864)<sup>2</sup>. *Cryptolechia* (4. *Stenoma* Z.) *frontalis* Z. Hor. Soc. Ent. Ross. 13 260 sp. 56 (1877)<sup>3</sup>.

*Type* ♀ Mus. Berol.

*Hab.* Central America—MEXICO<sup>1–3</sup>: GUERRERO: *Venta de Zopilote*, 2800 ft., X. (*H. H. Smith*)—GUATEMALA: *Volcan de Atitlan*, 2500–3500 ft., 1881 (*G. C. Champion*)—COSTA RICA: *Volcan de Irazu*, 6000–7000 ft. (*H. Rogers*).

15. *Stenoma mendax* Z.

*Cryptolechia mendax* Z. Linn. Ent. 10 161–3 sp. 18<sup>b</sup> (1855)<sup>1</sup>; Wkr. Cat. Lp. BM. 29 711 sp. 11 (1864)<sup>2</sup>. *Cryptolechia* (4. *Stenoma* Z.) *mendax* Z. Hor. Soc. Ent. Ross. 13 260 sp. 57, 285–6 sp. 20 (1877)<sup>3</sup>.

*Type* ♂ ♀ Mus. Berol.

*Hab.* AMERICA, C-S. Central America—PANAMA<sup>3</sup>: CHIRIQUI<sup>3</sup> (*Ribbe*). South America—BRAZIL<sup>1</sup>: *San Joao del Rey*<sup>1</sup>—PERU, E.<sup>3</sup>: *Chanchamayo* (*Thamm*)<sup>3</sup>.

16. *Stenoma radicalis* Z.

*Cryptolechia* (4. *Stenoma* Z.) *radicalis* Z. Hor. Soc. Ent. Ross. 13 260 sp. 58, 286-7 sp. 21 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

Hab. PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup> (*Ribbe*).

17. *Stenoma walchiana* Stoll.

= *lativittella* Wkr.<sup>5</sup>.

*Phalaena Tortrix walchiana* Stoll, Crmr. Pap. Exot. 4 191 Pf. 384 · F (1781), 252, Essai Syst. Lp. 27 (1782)<sup>1</sup>; Herbst Einl. Kenntz. Ins. 2 128-9 sp. 56 Pf. 46 E · 4 (1785)<sup>2</sup>. *Tortrix*? *walchiana* Wkr. Cat. Lp. BM. 28 325 sp. 33 (1863)<sup>3</sup>. *Cryptolechia lativittella* Wkr. Cat. Lp. BM. 29 720-1 sp. 49 (1864)<sup>4</sup>. *Antaeotricha walchiana* Wlsm. Pr. Z. Soc. Lond. 1897 99 (1897)<sup>5</sup>.

Hab. AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Bugaba, 800-1500 ft. (*G. C. Champion*). South America—VENEZUELA (*D. Dyson*)<sup>4-5</sup>—SURINAM<sup>1-3, 5</sup>—BRAZIL<sup>4-5</sup>: ESPIRITO SANTO (*Schmidt*)<sup>5</sup>: RIO DE JANEIRO: Corcovado (*W. Schaus*)<sup>5</sup>: SANTA CATHERINA<sup>5</sup>—PERU, SE.: CUZCO: Mts. (*Garlepp*).

Closely allied to *griseana* F., but larger and more robust; the dorsal area of the forewings is darker and more olivaceous than in *griseana*, and the hindwings are quite dark with the costa narrowly white in both sexes.

18. *Stenoma griseana* F.

= \**walchiana* (*nec* Stoll) Z.<sup>10</sup>.

*Pyrallis griseana* F. Ent. Syst. 3 (2) 265 sp. 96 (1794)<sup>1</sup>; Trtn. Syst. Nat. 3 352 (1802)<sup>2</sup>. *Stenoma griseanum* Z. Isis 1839 195 sp. 1 (1839)<sup>3</sup>. *Antaeotricha walchiana* Z. Linn. Ent. 9 391-3 sp. 1 Pf. 3 · 29-30 (1854)<sup>4</sup>. *Pyrallis griseana* Z. Linn. Ent. 9 393 (1854)<sup>5</sup>. *Antaeotricha walchiana* Wkr. Cat. Lp. BM. 29 773 sp. 1 (1864)<sup>6</sup>. *Antaeotricha griseana* (p.) Z. Hor. Soc. Ent. Ross. 13 315-6 sp. 8 (1877)<sup>7</sup>; Wlsm. Tr. Ent. Soc. Lond. 1891 101 (1891)<sup>8</sup>: Wlsm. & Drnt. Merton Rules 12 (1896)<sup>9</sup>; Wlsm. Pr. Z. Soc. Lond. 1897 98-9 sp. 108 (1897)<sup>10</sup>.

Hab. AMERICA, C-I-S. Central America—PANAMA: PANAMA: La Chorrera, IV-V. 1898 (*C. H. Dolby-Tyler*). West Indies ("Americae meridionalis Insulis")<sup>1-2, 10</sup>—TRINIDAD (*W. Schaus*, 6420)<sup>10</sup>. South America—COLOMBIA: MAGDALENA: Santa Marta, 1865 (*Bouchard*)—FRENCH GUIANA<sup>10</sup>: St. Laurent, Rio Maroni, 1-21. XI. 1906 (*E. Le Moult*); Cayenne (*Rgt.* 5394)<sup>10</sup>—BRAZIL<sup>4, 10</sup>: PARA<sup>4, 10</sup>: Cameta<sup>4, 10</sup>—BOLIVIA (*Stgr.* 71184).

19. *Stenoma discolor*, sp. n.

Antennae dirty whitish. Palpi white, with a brownish streak at the base of the median joint externally. Head dirty whitish; face white. Thorax whitish. Forewings with the costa evenly arched, apex rounded, termen obliquely convex; shining silvery white, with a long dark yellowish brown dorsal patch, sparsely sprinkled with white scales, occupying the whole space beneath the fold, and slightly overlapping the fold before and beyond its middle; a reduplicated yellowish spot, at the end of the cell,



is followed by a short pale greyish fuscous shade, a double curved row of pale greyish fuscous spots precedes the apex and termen, converging in a shade of the same colour about the tornus, but not reaching the costa; cilia shining, greyish white. *Exp. al.* 25–32 mm. *Hindwings* very pale brownish grey, costa and apex broadly white; cilia white, with a grey shade along their base. *Abdomen* brownish grey. *Legs* white.

*Type* ♀ (66132, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66133) US. Nat. Mus.]

*Hab.* Central America—MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 7000 ft., VII. (*H. H. Smith*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879 (*G. C. Champion*). Three specimens.

## 20. *Stenoma ribbei* Z.

*Antaeotricha ribbei* Z. Hor. Soc. Ent. Ross. 13 309–11 sp. 4 Pf. 3·91 (1877) <sup>1</sup>.

*Type* ♂ Mus. Stgr.

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Santa Rosa, VIII. 1906 (*W. Schaus*, 5878 Wlsm. Det. US. Nat. Mus.)—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Volcan de Chiriqui, 1872–3 (*Ribbe*)<sup>1</sup>. South America—BOLIVIA (*Stgr.* 71183).

## 21. *Stenoma fractinubes*, sp. n. (Tab. V. fig. 32.)

*Antennae* very pale brownish grey. *Palpi* white, the terminal joint slightly shaded with brownish grey towards the apex, and narrowly around its base. *Head* white. *Thorax* white, much suffused with brownish grey. *Forewings* with the costa arched on the basal third, slightly depressed about the middle, apex obtuse, termen straight; white, with an irregular greyish brown cloud commencing on the dorsum near the base, thence diffused outward and upward to the costa beyond the middle where it is connected with an apical and terminal shade of the same colour and with a shorter parallel shade preceding it; this cloudy suffusion is much broken up by longitudinal lines and streaks of the white ground-colour, a central one interrupted by a spot at the end of the cell being specially noticeable, the terminal shade-lines are also somewhat jagged and interrupted; cilia white, interrupted by grey-brown spots along their base on the termen. *Exp. al.* 21 mm. *Hindwings* pale brownish grey; cilia whitish. *Abdomen* brownish grey. *Legs* whitish, the tarsal joints ferruginous beneath.

*Type* ♀ (66135) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Unique.

## 22. *Stenoma caprimulga*, sp. n. (Tab. V. fig. 33.)

*Antennae* biciliate; brownish grey. *Palpi* white, with brownish stains along the outer sides of the median and terminal joints. *Head* and *Thorax* brown-grey; face white. *Forewings* elongate, subovate; white, partially suffused with brownish grey mixed with fuscous; the base and dorsum are almost entirely suffused, the ill-defined outer edge of the shaded area extending from the costa at one-fourth obliquely to the tornus, where it is joined by a more broken transverse shade from the costa before the apex, which is preceded by a strong triangular dark fuscous spot at the end of the cell; the apex and termen are also shaded with brown-grey, mixed, as are the other shades, with dark fuscous scales distributed about them cilia dirty whitish. *Exp. al.* 20 mm. *Hindwings* and cilia pale brownish grey; ♂ with an ochreous costal hair-pencil. *Abdomen* brownish grey. *Legs* whitish.

*Type* ♂ (66136) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

23. *Stenoma tolmeta*, sp. n. (Tab. V. fig. 34.)

*Antennae* bone-grey. *Palpi* bone-grey, a fuscous ring before the apex of the terminal joint. *Head* and *Thorax* bone-grey, with a brownish collar between them; face whitish. *Forewings* shining, bone-white, with dull brown markings; a brown dot at the middle of the base, a broken indication of an incomplete fascia descending obliquely outward from the costa at one-fourth to the fold, a complete fascia, rather less oblique, from the costa beyond the middle to the dorsum before the tornus, and another complete fascia from costa before apex to termen above tornus, with three or four brown spots along the termen; cilia bone-white. *Exp. al.* 14 mm. *Hindwings* and cilia very pale greyish fuscous. *Legs* bone-white. *Abdomen* (broken).

*Type* ♀ (5982 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

24. *Stenoma ochlodes*, sp. n. (Tab. V. fig. 35.)

*Antennae* bone-grey. *Palpi* bone-whitish, with a slight sprinkling of fuscous around the base and before the apex of the terminal joint, also toward the base of the median. *Head* and *Thorax* bone-whitish. *Forewings* rather shining, bone-whitish, with a dark fuscous dot at the extreme base of the fold, a broken, irregular, narrow, oblique brownish transverse fascia from the costa at one-fourth to the middle of the dorsum, throwing a slight angle outward on the cell, and somewhat mixed with fuscous scales, especially at its extremities; this is succeeded by another fascia from the costa a little beyond the middle, produced obliquely outward in a rather zigzag line to the upper angle of the cell, below which it helps to form a semidetached spot within the end of the cell, thence curving outward to the tornus, where it intersects an outwardly curved series of about ten dark fuscous spots, preceding the similarly spotted termen; the two series of spots converge on the costa and before the tornus, but the pale space between them is wider toward the apex than below it; cilia shining, bone-whitish. *Exp. al.* 15 mm. *Hindwings* pale bone-grey; cilia scarcely paler. *Abdomen* (missing). *Legs* shining, bone-white.

*Type* ♀ (5975 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

One of the small bone-whitish, obliquely fasciate species of which there are so many South American forms.

25. *Stenoma fractilinea*, sp. n.

*Antennae* biciliate 1; fawn-ochreous. *Palpi* bone-whitish, the median joint externally brownish fuscous, nearly to its apex; the terminal joint with a narrow ring at its base and another near its apex, both brownish fuscous. *Head* bone-ochreous. *Thorax* pale fawn-ochreous, a long square-ended lateral hair-pencil of whitish ochreous scales arising opposite to the base of the hindwings. *Forewings* pale fawn-ochreous, with an elongate dorsal shade at the extreme base, and two transverse lines beyond the middle, rust-brown; the first line commences a little below a strong median costal spot, and, tending outward to the upper angle of the cell, is curved downward and again outward to the dorsum; the second, commencing in a smaller costal spot at three-fourths, and slightly interrupted between the veins, tends obliquely outward nearly to the middle of the termen, thence descending to the tornus, where it joins the lower spot in a series of about seven, which follow the termen and extend around the apex; in addition to these markings three minute spots form an oblique series crossing the disc from about one-fourth from the base, the upper one elongate, oblique, the second beyond and below it on the disc, the third still further from the base, forming a minute dot on the fold; cilia pale bone-ochreous. *Exp. al.* 14 mm. *Hindwings* pale bone-grey; cilia with a slight ochreous tinge. *Abdomen* bone-greyish. *Legs* shining, bone-whitish.

*Type* ♂ (66137) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66139) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III-IV. (*H. H. Smith*). Two specimens.

26. *Stenoma mustela*, sp. n. (Tab. VI. fig. 1.)

*Antennae* brownish mouse-grey. *Palpi* whitish, smeared with brownish fuscous on the outer side of the median joint and towards the apex of the terminal, a narrow ring of the same around the base of the terminal. *Head* pale mouse-grey; face whitish grey. *Thorax* dark brownish mouse-grey. *Forewings* whitish grey, suffused and sprinkled with brownish mouse-colour, and with three, oblique, transverse, darker brownish fuscous streaks—the first, from the costa at about one-sixth, slightly dilated on the fold and on the dorsum before the middle; the second, from before the middle of the costa, slightly wavy, passing the outer end of the cell, where it forms a short outward streak, descending to the dorsum with some outward suffusion at one-third from the termen; the third streak approaches the middle of the termen in its long outwardly oblique curve and reverts to the tornus, a series of somewhat connected spots of the same colour following the margin beyond it; the costa is very narrowly clean whitish grey; cilia the same, but with a slight shade towards their base. *Exp. al.* 21 mm. *Hindwings* and cilia brownish grey. *Abdomen* brownish grey. *Legs* whitish, tinged with brownish grey.

*Type* ♀ (66140) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*).  
Unique.

This species, although very similar, differs from *aphanes* Wlsm. in the absence of a purplish tinge, and in the position of the transverse lines; also in the whitish, not ochreous, narrow edge to the costa.

27. *Stenoma aphanes*, sp. n.

*Antennae* pale brownish fuscous. *Palpi* brownish fuscous, the apex of the median joint and the upper side of the terminal whitish. *Head* roughly clothed above; pale brownish fuscous; face smoother and paler. *Thorax* purplish fuscous. *Forewings* lilac-grey, the costa narrowly ochreous throughout, with three waved transverse brownish lines: the first, at about one-fourth, descending obliquely from the costa to the dorsum before the middle—before this, at the flexus, is a patch of long rather raised scales of the ground-colour; the second, from beyond the middle of the costa, passing the end of the cell and almost coalescing with the recurved lower extremity of the third on the dorsum before the tornus; a few whitish grey scales mark the inner margins of these two by being a little paler than the lilac-grey ground-colour, similar scales preceding each of a series of brownish marginal spots on the apex and termen; cilia brownish grey at their base, hoary whitish grey on their outer half. *Exp. al.* 21 mm. *Hindwings* dull brownish grey; cilia pale bluish grey. *Abdomen* brownish grey. *Legs* pale brownish grey, with whitish tarsi.

*Type* ♀ (66141, *V. de Chiriqui*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66142; 5879 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* Central America—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*): CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Five specimens.

28. *Stenoma homala*, sp. n. (Tab. VI. fig. 8.)

*Antennae* pale golden. *Palpi* bone-white, shaded along the outer side of the median joint with brown. *Head* bone-white. *Thorax* bone-grey. *Forewings* with the costa arched at the base, straight beyond, the apex obtusely rounded, termen scarcely oblique; bone-grey, with dark brown marginal spots, one near the base of the costa, one scarcely beyond its middle, one a little beyond the flexus, and another more elongate on the middle of the dorsum; a small spot at the end of the cell, another in the fold, and a series around the apex and termen are less strongly indicated; in conjunction with the first dorsal

spot are a few projecting ochreous marginal scales; cilia bone-grey. *Exp. al.* 18 mm. *Hindwings* and cilia pale brownish grey. *Abdomen* bone-grey; anal tuft tinged with ochreous.

*Type* ♂ (66152) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

### 29. *Stenoma petrina*, sp. n. (Tab. VI. fig. 9.)

*Antennae* stone-grey. *Palpi* whitish, the median and terminal joints of about equal length, the median slightly shaded on the basal half externally, the terminal tipped with a shade of fawn-brown at the apex. *Head* fawn-whitish. *Thorax* pale fawn. *Forewings* with the costa slightly raised at the base, straight beyond, apex rectangular, termen slightly sinuate, scarcely oblique; stone-whitish, with a very pale fawn-brownish suffused shade; a fuscous shade on the cell at one-fourth, with a smaller one on the fold, below and a little beyond it, is succeeded by another at the end of the cell, beyond which is a curved series of very indistinct fawn-brownish shade-streaks at the base of the diverging veins; beyond these is a series of dots of the same colour, commencing with three from the costa, forming an angle below it a little darker than the remainder, which, curving outward opposite to the middle of the termen, revert to the dorsum before the tornus; a further series of brownish fuscous dots, two costal and seven terminal, extends around the margin; cilia pale stone-colour. *Exp. al.* 20–21 mm. *Hindwings* broader than the forewings, the termen sinuate; whitish grey; cilia stone-white, with a narrow fawn-ochreous line along their base. *Abdomen* shining, fawn-whitish; anal tuft ochreous.

*Type* ♀ (66148, *San Isidro*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* Central America—GUATEMALA: San Isidro, 1600 ft., 10–23. IX. 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Two specimens.

### 30. *Stenoma catenifer*, sp. n.

*Antennae* biciliate  $1\frac{1}{2}$ ; pale fawn-ochreous. *Palpi* whitish, the median joint fuscous externally to two-thirds from its base. *Head* pale fawn-ochreous, somewhat roughly clothed above and in front. *Thorax* fawn-ochreous. *Forewings* pale fawn-ochreous, with some darker sprinkling towards the base and costa and on the middle of the dorsum; a strong blackish discal spot at the end of the cell, another half-way to the base on the upper edge of the cell, with a third in the middle of the fold; a series of inwardly pointed dentate blackish spots from the commencement of the costal to the beginning of the dorsal cilia forms a continuous chain with a similar series of more flattened spots around the apex and termen; the first portion of the chain, or that which crosses the wing-surface, is abruptly angulated outward below the costa and above the tornus, the outer angle being abruptly cut off by a pair of strong spots opposite to a point a little above the termen; cilia fawn-whitish. *Exp. al.* 23 mm. *Hindwings* very pale fawn-grey, somewhat iridescent between the veins; cilia slightly paler. *Abdomen* fawn-ochreous. *Legs* fawn-ochreous.

*Type* ♂ (66175, *Coatepeque*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66174) US. Nat. Mus.]

*Hab.* GUATEMALA: Coatepeque, 1300 ft., X. 1880 (*G. C. Champion*). PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Three specimens.

Two ♀ ♀ from Volcan de Chiriqui are inseparable in markings from the type. The hindwings are half a shade darker in colour, and perhaps the forewings also a little darker and broader, but the most interesting difference consists in the fact that veins 6 and 7 of the hindwings in the ♀ ♀ may be said to be connate rather than stalked, whereas the 'stalk' in the ♂, although close to the cell, is unmistakable. We find this difference even more emphasised in the closely allied *sororia* Z., a

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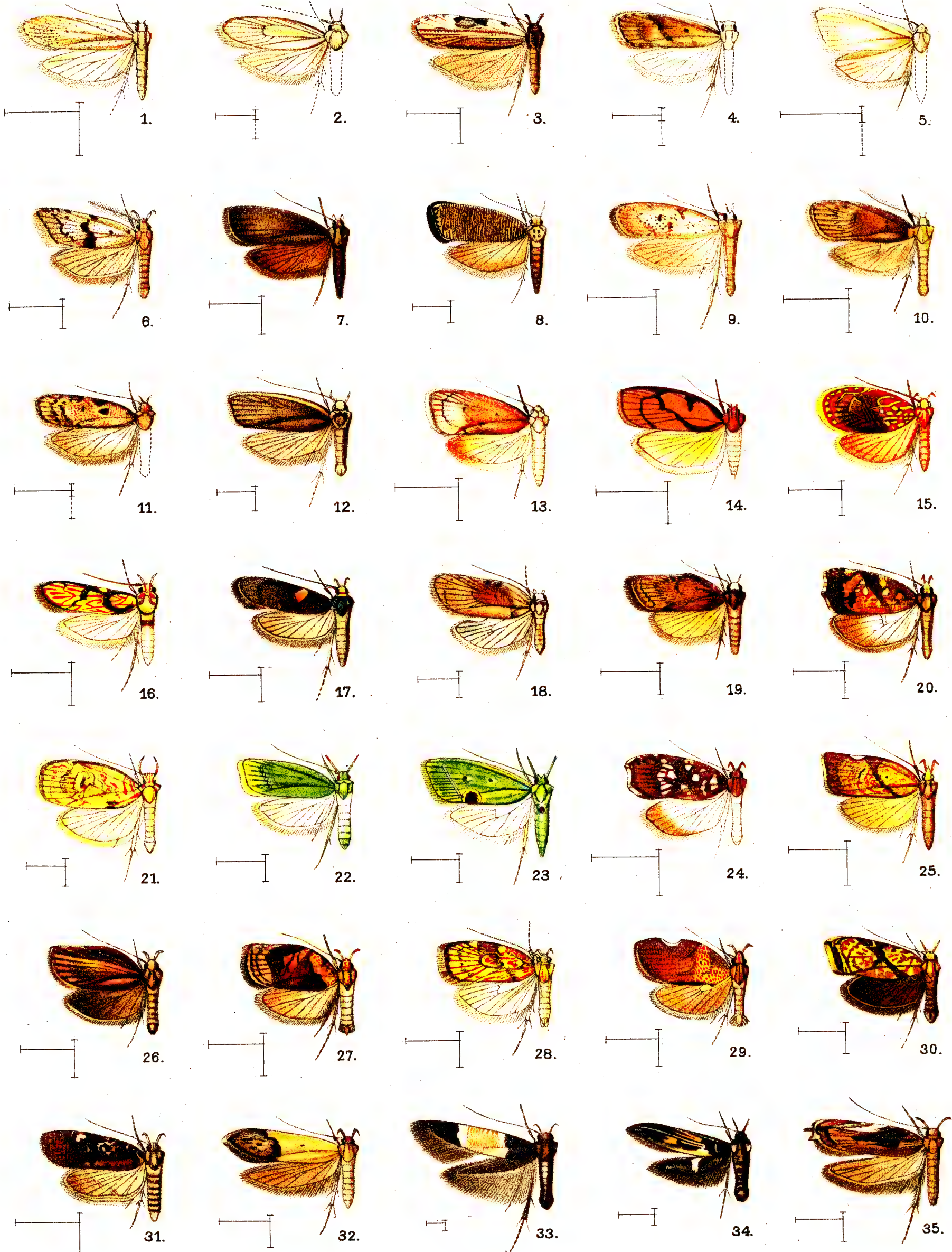
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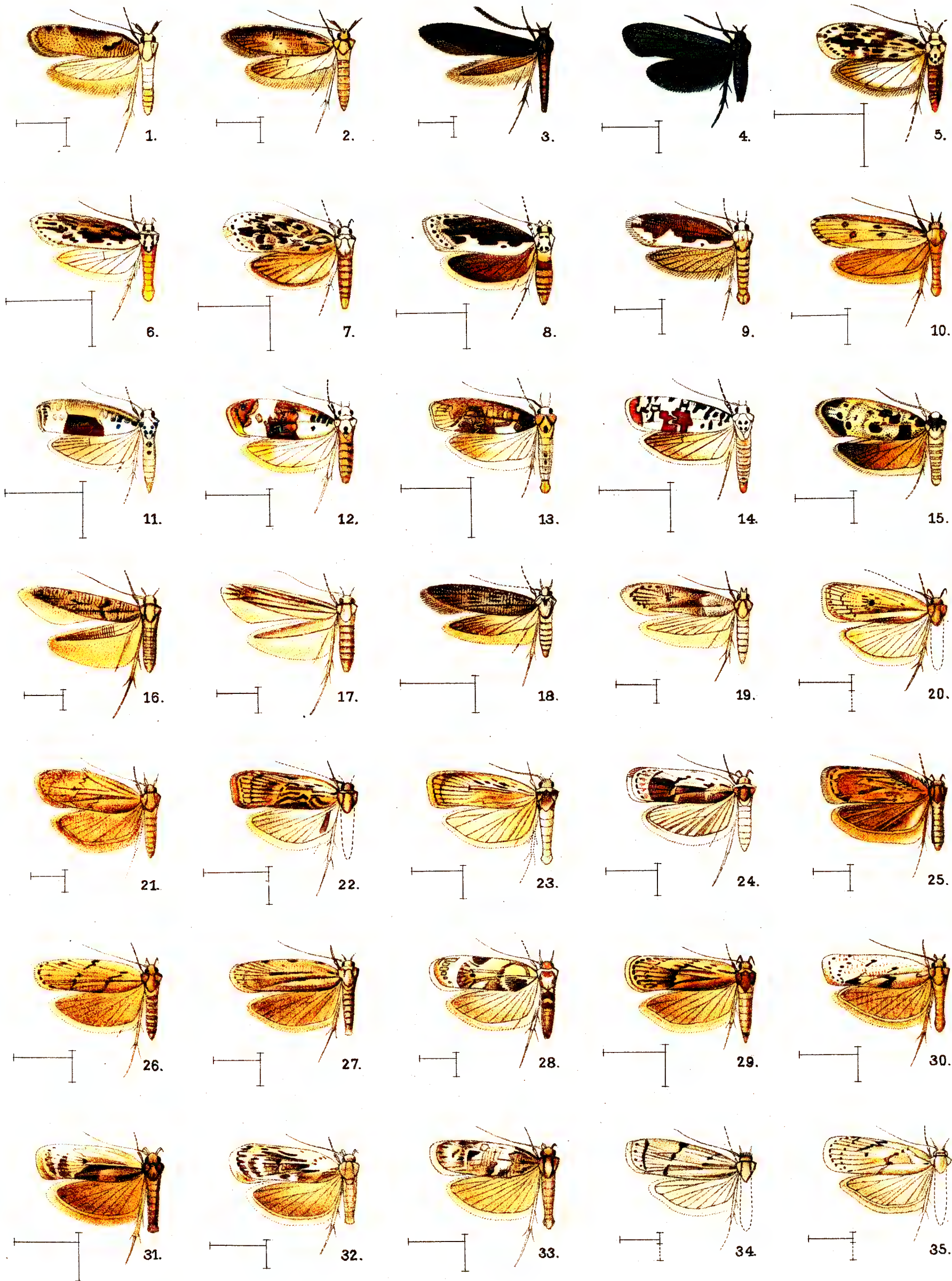
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**MICRO-LEPIDOPTERA.** By LORD WALSHINGHAM.

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The Editor will prepare, at the conclusion of the Work, an Introductory Volume, wherein the physical features of the country will be described and illustrated with maps.



PART CCXII. A.]

[FEBRUARY 1913.

BIOLOGIA  
CENTRALI-AMERICANA;

OR,

CONTRIBUTIONS TO THE KNOWLEDGE  
OF THE  
FAUNA AND FLORA  
OF  
MEXICO AND CENTRAL AMERICA.

EDITED BY

F. DUCANE GODMAN.

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ZOOLOGY.

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# BIOLOGIA CENTRALI-AMERICANA.

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specimen from Petropolis having these veins distinctly stalked, whereas Zeller's types from Ubaque have them very closely approximate at the base; a Mexican specimen (Presidio, 66204) takes an intermediate position, while the Central American specimens resemble the typomorph.

### 31. *Stenoma sommerella* Z.

*Cryptolechia* (3. *Cryptolechia* Z.—b) *sommerella* Z. Hor. Soc. Ent. Ross. 13 260 sp. 45, 278–9 sp. 15 Pf. 3·78 (1877)<sup>1</sup>.

Type ♀ (Sommer Coll.) Mus. Stgr.

Hab. [Central America?]

Zeller described this species from a single ♀ “aus der Sommer'schen Sammlung im Museum Staudinger”<sup>1</sup>.

### 32. *Stenoma luscina* Z.

*Cryptolechia* (5. b) *luscina* Z. Hor. Soc. Ent. Ross. 13 260 sp. 65, 288–9 sp. 23 (1877)<sup>1</sup>.

Type ♂ ♀ Mus. Stgr.

Hab. PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>.

### 33. *Stenoma sciaphilina* Z.

*Cryptolechia* (5. b) *sciaphilana* Z. Hor. Soc. Ent. Ross. 13 261 sp. 71, 291–3 sp. 25 Pf. 3·81 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

Hab. PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>.

### 34. *Stenoma particularis* Z.

*Cryptolechia* (5. b) *particularis* Z. Hor. Soc. Ent. Ross. 13 261 sp. 72, 293 Pf. 3·82 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

Hab. PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>.

### 35. *Stenoma ochricollis* Z.

*Cryptolechia* (5. b) *ochricollis* Z. Hor. Soc. Ent. Ross. 13 261 sp. 73, 294–5 sp. 26 Pf. 3·83 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

Hab. PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>.

### 36. *Stenoma muscula* Z.

*Cryptolechia* (5. b) *muscula* Z. Hor. Soc. Ent. Ross. 13 261 sp. 74, 295–6 sp. 27 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

Hab. PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>.

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37. *Stenoma promotella* Z.

*Cryptolechia* (5. b) *promotella* Z. Hor. Soc. Ent. Ross. 13 261 sp. 75, 296-7 sp. 28 Pf. 3·84 (1877)<sup>1</sup>.

Type ♂ Mus. Stgr.

Hab. PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>.

38. *Stenoma residuella* Z.

*Cryptolechia* (5. b) *residuella* Z. Hor. Soc. Ent. Ross. 13 261 sp. 76, 297-8 Pf. 3·85 (1877)<sup>1</sup>.

Type ♂ (? *Sommer Coll.*) Mus. Stgr.

Hab. [Central America?]

Zeller described this species from a single ♂ "sicher auch dem wärmern Amerika stammend, im Museum Staudinger"<sup>1</sup>—this specimen, like others previously mentioned, was probably from the Sommer Collection, but this is not actually stated.

39. *Stenoma admixta*, sp. n. (Tab. VI. fig. 3.)

*Antennae* biciliate  $1\frac{1}{2}$ ; brownish ochreous. *Palpi* cinereous, the median joint tinged with brownish externally. *Head* pale brownish cinereous; face hoary. *Thorax* brownish cinereous, mixed with fuscous scales. *Forewings* brownish cinereous, profusely dusted with hoary whitish scaling, and dappled with diffused obscure fuscous spots, the costa narrowly pale brownish ochreous throughout; with two spots near the base, and five others, somewhat elongate, between the middle and the apex, the series being continued along the termen in five narrow marginal spots; the fuscous dappling of the wing-surface commences at the base, above the fold, forming three spots in the basal fourth, and two others below the middle of the costa, but, except for a faint indication of smaller spots along the cell, with one at its outer end, this colouring is broken up into scattered scaling, forming two small groups on the dorsum beyond the middle, but otherwise about equally distributed with the hoary white and brownish cinereous (almost brownish ochreous) which forms the general colour of the wing, a projecting group of brownish ochreous scales standing out from the dorsum near the base; cilia brownish ochreous, mottled with pale greyish fuscous and hoary cinereous. *Exp. al.* 21 mm. *Hindwings* broader than the forewings, the costa much enlarged upon its basal half with long spatulate projecting scales, termen strongly sinuate on vein 5; brownish grey, with a long subcostal pencil of pale brownish grey hair-scales from near the base, above; cilia pale cinereous, a brownish grey shade-line running through them. *Abdomen* brownish grey. *Legs* pale cinereous.

Type ♂ (66146) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

Hab. MEXICO: GUERRERO: Dos Arroyos, 1000 ft., IX. (*H. H. Smith*). Unique.

40. *Stenoma pauperatella* Wkr. (Tab. VI. fig. 13.)

*Cryptolechia pauperatella* Wkr. Cat. Lp. BM. 29 721-2 sp. 51 (1864)<sup>1</sup>.

*Antennae* dirty chalk-whitish. *Palpi* white, with a brownish fuscous shade externally to beyond the middle of the median joint. *Head* white. *Thorax* dirty chalk-white, with a greyish tinge. *Forewings* with the costa slightly arched toward the base, widened outward, the apex obtuse, termen moderately straight, tornus rounded; dull chalk-whitish, sparsely sprinkled beyond the middle with scattered brown scales; a minute brown spot lies at the base of the costa, a large brown spot on the middle of the costa, a still larger outwardly diffused brown spot at the end of the cell; a small group of brown scales on the cell, at about one-third from the base, with others below them on the middle of the fold; there is also an outwardly bowed series of brown dots before the termen, inwardly angulated before reaching the costa, and a second marginal series along the apex and termen; cilia whitish cinereous. *Exp. al.* 22 mm.

*Hindwings* not sinuate below the apex; pale brownish grey; cilia whitish cinereous. *Abdomen* pale brownish ochreous above, white beneath. *Legs* whitish, tinged with ochreous above the tibiae and beneath the tarsi.

*Type* ♂ (1857:20, *Ega*) Mus. Br.; *Nt.* ♀ (66157, *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). South America—VENEZUELA: Aroa (*W. Schaus*)—BRAZIL<sup>1</sup>: AMAZONS<sup>1</sup>: Ega (*H. W. Bates*)<sup>1</sup>.

#### 41. *Stenoma compressa*, sp. n. (Tab. VI. fig. 14.)

*Antennae* ♂ biciliate -1; very pale brownish grey. *Palpi* whitish, the median joint shaded with brownish fuscous externally. *Head* and *Thorax* very pale stone-greyish. *Forewings* with the costa slightly convex, apex and tornus rounded, termen straight; pale stone-grey, with pale rust-brown markings which tend to throw up rather more intensely coloured rust-brown scales along their margins; these consist of first, an irregular, large, dorsal patch covering two-fifths of the dorsum, throwing out a slight angle on the fold, and a stronger projecting angle upward nearly to the costa, but not reaching the base; secondly, a broken and rather outwardly oblique fasciate shade a little beyond the middle, forming a costal spot, an inwardly projecting patch at the end of the cell, and a short length-spot on the dorsum, connected to the cell-spot by a narrow sinuate line; thirdly, a costal spot before the apex, connected with the tornus by an outwardly convex narrow line of spots on the veins; around the apex and termen is also a line of semidetached brown spots; the costa is narrowly tinged with ochreous; cilia pale ochreous. *Exp. al.* 18 mm. *Hindwings* pale brownish grey; cilia pale cinereous. *Abdomen* brownish grey. *Legs* whitish cinereous.

*Type* ♂ (66153) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

#### 42. *Stenoma diatriba*, sp. n. (Tab. VI. fig. 15.)

*Antennae* fawn-whitish. *Palpi* (broken). *Head* and *Thorax* fawn-whitish, the latter with a slight shade of fawn-brown; face paler. *Forewings* dull fawn-whitish, somewhat sprinkled with fawn-brownish scales, variable in the intensity of their colour; at the extreme base of the costa is a blackish spot, and a few blackish scales in the fold near its base; two blackish costal spots, one on the middle, the other half-way between this and the apex, and below them, and equidistant from each, is a slightly smaller round spot of the same colour at the end of the cell; two parallel lines of small dark fuscous spots, emanating from the upper and lower extremities of the outer costal spot respectively, tend to converge only at their lower extremities on the dorsum before the tornus, the outer series following the margin around the apex and termen, the other series slightly preceding it; cilia fawn-whitish. *Exp. al.* 19 mm. *Hindwings* brownish grey; a pale line, followed by a slight shade, running along the base of the scarcely paler cilia. *Abdomen* brownish grey. *Legs* shining, pale brownish cinereous; the two anterior pairs much shaded with greyish fuscous.

*Type* ♀ (5984 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* GUATEMALA: ALTA VERA PAZ: Cacao, Trece Aguas, 1906 (*E. A. Schwarz & H. Barber*). Unique.

#### 43. *Stenoma mendoron* Busck. (Tab. VI. fig. 16.)

*Stenoma mendoron* Busck Pr. US. Nat. Mus. 40 214 Pf. 8·20 (1911)<sup>1</sup>.

*Type* ♂ (13570 *St. Jean*) US. Nat. Mus. [*PT.* ♂ (33877) Mus. Wlsm. BM.]

*Hab.* AMERICA, C-S. Central America—PANAMA: PANAMA: La Chorrera, 1.IV–15.V.1898 (*C. H. Dolby-Tyler*). South America—FRENCH GUIANA<sup>1</sup>: St. Jean, Rio Maroni (*W. Schaus*)<sup>1</sup>.

44. *Stenoma forreri*, sp. n. (Tab. VI. fig. 2.)

*Antennae* whitish ochreous. *Palpi* white, with a slight ochreous tinge externally, a short brown shade about the base. *Head* creamy whitish. *Thorax* brownish ochreous in front, dark fuscous behind. *Forewings* creamy whitish, with irregular pale brownish ochreous suffusion, a dark fuscous dorsal patch commences at the base below the fold, and extends to about one-fifth; a short transverse black streak lies on the cross-vein at the end of the cell, a line of brownish scales extending to the dorsum below it; a slight brownish ochreous shade, on the costa at four-fifths, gives rise to a faint outwardly curved line of the same colour, which reverts to the dorsum before the tornus, and beyond this is a subapical shade of diffused brownish scales; cilia cream-whitish, mottled with brownish ochreous. *Exp. al.* 20 mm. *Hindwings* slightly sinuate below the apex; pale tawny brownish; cilia whitish cinereous. *Abdomen* and *Legs* pale brownish ochreous.

*Type* ♀ (66145, *Presidio*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* Central America—MEXICO: DURANGO: *Presidio* (*A. Forrer*)—PANAMA: DARIEN: Caña Mines, IX. 1898 (*J. H. W. Tylecote*). Two specimens.

The specimen from Caña Mines (68577) is a ♂ with strong ochreous subcostal hair-pencil on the hindwings.

45. *Stenoma sublimbata* Z.

*Antaeotricha sublimbata* Z. Hor. Soc. Ent. Ross. 13 325–6 sp. 14 Pf. 4·101 (1877)<sup>1</sup>.

*Type* ♂ Mus. Stgr.

*Hab.* AMERICA, C-S. Central America—PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>. South America—COLOMBIA: TOLIMA: Sierra del Libano, 6000 ft., V. 1906 (*H. H. Smith*)—BOLIVIA (71191 Stgr. 1903).

46. *Stenoma pyramidea*, sp. n.

*Antennae* biciliate  $\frac{3}{4}$ ; pale fawn. *Palpi* smooth, recurved, not slender, terminal joint shorter than the median; pale fawn. *Head* pale fawn. *Thorax* reddish fawn. *Forewings* pale reddish fawn, shading to tawny on the dorsal half; a triangular pale reddish fawn dorsal patch beyond the middle, its apex reaching the lower margin of the cell; cilia pale fawn. *Exp. al.* 21–23 mm. *Hindwings* fawn-grey; cilia scarcely paler. *Abdomen* and *Legs* fawn-grey.

*Type* ♀ (66160); ♂ (66161) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66163) US. Nat. Mus.]

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., VIII–IX. 1880 (*G. C. Champion*). Four specimens.

47. *Stenoma amicula* Z.

*Antaeotricha amicula* Z. Hor. Soc. Ent. Ross. 13 317–8 sp. 9 Pf. 4·96 (1877)<sup>1</sup>.

*Type* ♂ Mus. Stgr.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Volcan de Chiriqui (*Ribbe*)<sup>1</sup>.

48. *Stenoma fascicularis* Z. (Tab. VI. fig. 12.)

*Antaeotricha fascicularis* Z. Linn. Ent. 9 393–5 sp. 2 Pf. 3·32–3 (1854)<sup>1</sup>; Wkr. Cat. Lp. BM. 29 773 sp. 2 (1864)<sup>2</sup>.

*Type* ♂ Mus. Berol.

*Hab.* AMERICA, C-S. Central America—GUATEMALA: SOLOLA: Toliman, XII. 1880 (*G. C. Champion*). South America—FRENCH GUIANA: St. Laurent, Rio Maroni, 1–15. XI. 1906 (*E. Le Moult*)—ECUADOR: Cuchubé, XII. 1896 (*W. F. H. Rosenberg*)—BRAZIL<sup>1-2</sup>: AMAZONS: Rio Jutahy (*J. W. H. Trail*).

49. ***Stenoma zelleri*** Wlsm. & Drnt.

=\**griseana* (*nec* F.) Z.<sup>2</sup>.

*Antaeotricha griseana* Z. Hor. Soc. Ent. Ross. **13** 315–6 sp. 8 Pf. 4·95 (1877)<sup>1</sup>. *Antaeotricha zelleri* Wlsm. & Drnt. Merton Rules p. 12 (1896)<sup>2</sup>; Wlsm. Pr. Z. Soc. Lond. 1897 99 (1897)<sup>3</sup>.

*Type* ♂ [*griseana* (F.) Z.] Mus. Stgr.

*Hab.* AMERICA, C-S. Central America—GUATEMALA: SACATE PEQUEZ: Zapote, 2000 ft., V–VI. 1879 (*G. C. Champion*)—PANAMA<sup>1-3</sup>: CHIRIQUI (*Ribbe*)<sup>1-3</sup>. South America—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*)—ECUADOR: Cuchubé, XII. 1896 (*W. F. H. Rosenberg*).

50. ***Stenoma chalepa***, sp. n. (Tab. VI. fig. 4.)

*Antennae* yellowish brown. *Palpi* pale cinereous, shaded externally with greyish fuscous, nearly to the apex. *Head* grey-blue; face cinereous. *Thorax* brownish, mixed with greyish fuscous. *Forewings* broad, the costa arched near the base, straight beyond, the apex scarcely depressed; dark fuscous, mottled with dull fawn-ochreous near the base, the greater portion of their surface beyond being sprinkled with slender elongate bluish white hair-scales, from which the costa and an ill-defined reduplicated subapical band, parallel with the margin, are comparatively free; cilia dark brown, with an even darker shade-line along their base. *Exp. al.* 22 mm. *Hindwings* umber-brown; cilia brownish cinereous, with a slender dark dividing line near the base. *Abdomen* dark brown; the anal appendages beneath pale ochreous. *Legs* whitish, the tarsi shaded with brownish.

*Type* ♀ (66149) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*).  
Unique.

51. ***Stenoma ochropa***, sp. n.

*Antennae* biciliate 1, the basal joint slightly thickened; brownish grey. *Palpi* smooth, recurved; white, the terminal joint shorter than the median. *Head* with inverted brownish grey scales meeting above posteriorly; front and face white. *Thorax* brownish grey. *Forewings* ovate; brownish grey, the costa narrowly tinged, especially beyond the middle, with coppery brown extending a little below the rounded apex; a slight stain of the same colour is visible toward the outer end of the cell, and around it are scattered a few whitish scales; cilia cinereous, with a dark shade-line running through them near their base. *Exp. al.* 18 mm. *Hindwings* dark brown; cilia with a greyish tinge. *Abdomen* greyish brown; anal tuft cinereous; underside white. *Legs* whitish, the hind tibiae stained with greyish externally.

*Type* ♂ (66170) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66171) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*).  
Two specimens.

52. *Stenoma menestella*, sp. n. (Tab. VI. fig. 5.)

*Antennae* greyish fuscous. *Palpi* (missing). *Head* and *Thorax* dark slaty grey. *Forewings* elongate, moderately straight, apex and termen evenly rounded; dark slaty grey, with a white transverse streak, from a little beyond the middle of the costa, running obliquely outward with a slight curve to the outer third of the dorsum; on the extreme costa the white scales are diffused inward and outward for a short distance, and the streak is a little dilated above the dorsum; there is also a small white spot at the apex running through the cilia. *Exp. al.* 13 mm. *Hindwings* and cilia dark brown, whitened along the costa toward the base. *Abdomen* dark slaty grey above, white beneath. *Legs* shining, silvery white, slightly smeared with slaty grey on their outer sides.

*Type* ♀ (2324) Mus. Wlsm. BM.

*Hab.* PANAMA: Panama, 7. X – 26. XI. 1881 (*J. J. Walker*). Unique.

This species differs from *niviliturella* Wkr. (*Gelechia*: Cat. Lp. BM. 30 1020) in the face and base of the antennae not being silvery white, and in the costa being white only along the middle, not throughout; it is also closely allied to *filiferella* Wkr. (*Cryptolechia*: Cat. Lp. BM. 29 744 sp. 97).

53. *Stenoma luctifica* Z.

*Cryptolechia* (5. c) *luctifica* Z. Hor. Soc. Ent. Ross. 13 261 sp. 82, 301–3 sp. 31 (1877)<sup>1</sup>.

*Type* ♀ (*Chiriqui*, Mus. Stgr.). [PT. (102215, *Rio Magdalena*) Mus. Wlsm. BM.]

*Hab.* AMERICA, C-S. Central America—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup> (*Ribbe*). South America—COLOMBIA<sup>1</sup>: Rio Magdalena, 24. I. 1871 (*Baron von Nolcken*)<sup>1</sup>—FRENCH GUIANA: Cayenne (*W. Schaus*, 33807); St. Laurent, Rio Maroni, 8. XI. 1906 (*E. Le Moult*)—PERU: JUNIN: Rio Perene, 1899 (*W. F. H. Rosenberg*): CUZCO: Mts. (*Garlepp*).

54. *Stenoma lavata*, sp. n. (Tab. VI. fig. 6.)

*Antennae* biciliate 2; pale ochreous. *Palpi* white, stained at the base with brownish fuscous. *Head* white. *Thorax* greyish ochreous. *Forewings* elongate, subovate; very pale brownish ochreous, with the apex and termen white, two or three lines of brownish ochreous extending along the veins through the white apical space; below the fold are two, rather oblique, dorsal patches of dark rust-brown, one before, and one beyond the middle, a third lying on the upper edge of the fold nearer to the base; a small spot at two-thirds of the wing-length, above the upper angle of the cell, is faintly indicated; cilia whitish, slightly touched with brownish ochreous. *Exp. al.* 15 mm. *Hindwings* yellowish grey, with a brownish fuscous costal tuft; cilia white. *Abdomen* pale brownish ochreous. *Legs* whitish.

*Type* ♂ (66151) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa (*H. H. Smith*). Unique.

55. *Stenoma ostodes*, sp. n.

*Antennae* biciliate 1; pale bone-ochreous, basal joint greyish fuscous above. *Palpi* bone-white, the median joint greyish fuscous externally. *Head* and *Thorax* bone-white, with a slight ochreous tinge. *Forewings* with the costa arched before the middle, apex rounded, termen convex, scarcely oblique; bone-white, with a very faint suffusion of bone-grey on the dorsal half and in a semicircular shade arising from the tornus; a greyish fuscous spot, at the extreme base of the costa, is followed by another costal spot at one-fifth, and before the apex are two faint, elongate, greyish fuscous costal shades; a small, very faint,



reduplicated spot, on the disc at one-fourth, is followed by a similar double dot at the end of the cell, beneath which is a small inwardly oblique greyish fuscous dorsal streak; cilia bone-whitish. *Exp. al.* 19–20 mm. *Hindwings* wider than the forewings; pale bone-grey, the costa much elevated at the base, with a broad fringe of spatulate scales, greyish fuscous on their underside, also a long pencil of pale bone-ochreous hair-scales from near the base of the costa on the upper side; cilia a little paler than the wings, with a slight ochreous tinge. *Abdomen* brownish ochreous. *Hind Legs* bone-white, tinged with brownish ochreous externally.

*Type* ♂ (66158, *Senahu*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66159) US. Nat. Mus.]

*Hab.* GUATEMALA: ALTA VERA PAZ: Panima 1800 ft., X. 1879 (*G. C. Champion*); *Senahu*, 2800 ft., 17–23. XI. 1879 (*G. C. Champion*). Two specimens.

56. *Stenoma aztecana*, sp. n. (Tab. VI. fig. 7.)

*Antennae* biciliate 1; yellowish grey, the base white. *Palpi* snow-white, the median joint shaded nearly to its apex externally with fuscous; the apex of the terminal joint broadly fuscous, a narrow fuscous ring around its base. *Head* snow-white. *Thorax* snow-white, with a reduplicate dark fuscous spot on its hinder margin. *Forewings* snow-white, with four dark fuscous costal spots and a marginal series of nine from apex to tornus, all clearly defined—the first spot is a little below the extreme base of the costa, the second, also a little below the costa, at one-fourth, these are connected by a bright yellow streak along the costa; the third spot, a little beyond the middle, is also separated from the costa by a few bright yellow scales; the fourth spot touches the costa, but is separated from the first of the terminal series by a streak of bright yellow; cilia silvery white. *Exp. al.* 20 mm. *Hindwings* shining, pale brownish grey; cilia silvery white. *Abdomen* whitish grey. *Legs* shining, whitish, the tarsi banded with fuscous.

*Type* ♂ (2451) Mus. Wlsm. BM.

*Hab.* MEXICO: GUERRERO: Acapulco, 20. VI. 1882 (*J. J. Walker*). Unique.

57. *Stenoma ferricanella* Wkr. (Tab. VI. fig. 10.)

*Cryptolechia ferrocanella* Wkr. Cat. Lp. BM. 29 716–7 sp. 41 (1864)<sup>1</sup>.

*Antennae* biciliate 1; pale fawn-ochreous. *Palpi* pale fawn-ochreous, the median joint fawn-brown externally. *Head* greyish; face pale fawn-ochreous. *Thorax* pale rosy grey, an ochreous spot on its hinder margin. *Forewings* with the costa slightly arched, apex obtuse, termen straight; pale rosy grey at the base, on the middle of the costa, and along the termen and apex, with a wash of reddish fawn between the grey patches, becoming tawny vinous along the edges of the fawn spaces; this colour appears conspicuously at the costal extremity of the first fawn patch, also along its inwardly oblique sinuate inner edge, which, leaving the costa at one-third, runs to the dorsum near the base; a tawny vinous spot lies in the fold, a little beyond its middle, and, above and beyond this, a large reniform fawn patch, partially isolated by lines of rosy grey, lies at the end of the cell, its narrow vinous margin produced downward to the dorsum before the tornus—thus bounding a second large fawn patch rising from the tornus to the outer third of the costa, its outer edge throwing out short dentate projections between the veins; a marginal row of small vinous spots bounds the outer side of the elongate rosy grey terminal patch; cilia shining, fawn-ochreous, with a slight rosy tinge. *Exp. al.* 25 mm. *Hindwings* yellowish, costa whitish; cilia shining, pale yellowish, with a tawny tinge about the extreme apex. *Abdomen* shining, whitish at the base, banded with pale fawn-brown across the middle, the anal tuft fawn-brown; underside white. *Legs* white, with an aeneous gloss on the underside of the tarsi.

*Type* ♂ (1855: 44, *Villa Nova*) BM.; Nt. ♂ (2448, *Taboga Id.*) Mus. Wlsm. BM.

*Hab.* AMERICA, C-S. Central America—PANAMA: TABOGA I., 29. V – 3. VI. 1882 (*J. J. Walker*). South America—BRAZIL<sup>1</sup>: AMAZONS: Villa Nova (*H. W. Bates*)<sup>1</sup>.

58. *Stenoma nebrita*, sp. n. (Tab. VI. fig. 11.)

*Antennae* biciliate 1; pale bone-greyish. *Palpi* white, the median joint externally yellowish brown. *Head* white, some raised pale ochreous scales posteriorly. *Thorax* whitish ochreous above, shaded with flesh-colour at the sides and in front, the base of the tegulae dark tawny fuscous. *Forewings* elongate, moderately straight, widened outwards, apex rounded, termen scarcely oblique; rosy grey, mottled with pale ochreous, streaked with pale chestnut, and traversed at the outer fourth by a reduplicate waved cross-band of white, the space between the two white margins mouse-grey; the base of the costa is chestnut-brown, followed by an ovate whitish ochreous patch, shading into yellowish ochreous at its edges; this is bounded externally by an outwardly oblique chestnut-brown costal streak, which is followed by a larger, rosy, flesh-like patch, bounded externally by a curved chestnut costal streak; the wing-surface beyond and below these costal patches is for the most part rich rosy grey to two-thirds from the base, but contains a short transverse chestnut dash at the end of the cell and a pale ochreous rounded spot above the dorsum a little before the middle, a patch of chestnut on the dorsum nearer to the base, and another before the white fasciae at about two-thirds; beyond the wavy white fascia the apical portion of the wing is also rich rosy grey, with a marginal shade of chestnut on the termen and apex, but not descending to the tornus; cilia silvery grey, shaded with rosy grey at their base. *Exp. al.* 20 mm. *Hindwings* with the costa moderately straight, termen slightly sinuate; brownish grey; cilia shining, pale brownish grey. *Abdomen* brownish ochreous above, greyish fuscous beneath. *Hind Legs* yellowish white, the tarsi with two pale greyish fuscous bands above.

*Type* ♂ (66169) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800–1000 ft. (*G. C. Champion*). Unique.

59. *Stenoma arenaria*, sp. n.

*Antennae* pale testaceous. *Palpi* whitish, shaded with brown above and outwardly at the base, a brown spot before the extreme apex. *Head* sandy ochraceous, paler on its anterior half, inclining to whitish posteriorly. *Thorax* whitish. *Forewings* with the costa arched near the base, apex rounded, termen obliquely convex; sandy ochraceous, becoming white toward the apex, with oblique shades of mixed ochreous and greyish brown coming from the costa—the first, at one-fourth from the base, short and broken, terminating in a spot of black scales on the disc; the second, about the middle, somewhat more emphasised, and accompanied by small groups of black scales tending in the direction of an elongate black scale-patch, which reaches to the termen a little below the middle; the third costal shade, arising at about three-fourths, tends outward to below the apex, but is separated by the white ground-colour, which also appears between the three oblique shades on the costa itself; below and above the fold, near the base, are a few raised ochreous scales, and the first and second bands are also accompanied by some raised scales; termen slightly spotted; cilia whitish, much mixed with ochreous and brownish grey; underside without markings. *Exp. al.* 21–23 mm. *Hindwings* brownish grey; cilia slightly paler. *Abdomen* brownish grey. *Legs* whitish, sprinkled with brownish grey.

*Type* ♂ (7386, *Espirito Santo*) Mus. Wlsm. BM. [*PT.* (67725) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—PANAMA: PANAMA: La Chorrera, 1. IV – 15. V. 1898 (*C. H. Dolby-Tyler*). South America—BRAZIL: ESPIRITO SANTO: 1872 (*Schmidt*). Three specimens.

60. *Stenoma ammodes*, sp. n. (Tab. VI. fig. 18.)

*Antennae* biciliate –1; brownish ochreous. *Palpi* ochreous, the median joint shaded with brownish externally. *Head* and *Thorax* pale ochreous, brighter at the sides and on the tegulae. *Forewings* a little narrowed beyond the middle, apex obtuse, rounded, termen evenly convex; rich bright ochreous, unicolorous, except for a few, even more intensely coloured, long scales about the flexus; cilia concolorous.

*Exp. al.* 15.5 mm. *Hindwings* broader than the forewings; together with the cilia shining pale yellowish. *Abdomen* pale brownish ochreous. *Legs* whitish ochreous.

*Type* ♂ (66155) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa (*H. H. Smith*). Unique.

61. ***Stenoma trochalosticta***, sp. n. (Tab. VI. fig. 19.)

*Antennae* biciliate 2; buff-brown. *Palpi* smooth, rosy red; the inner sides and terminal joint pale cinereous. *Head* rosy cinereous, with long overhanging flat frontal scales, a raised collar of the same turned back toward the thorax. *Thorax* with a bright ferruginous elevated tuft above, the scales tipped with dull whitish; tegulae rosy red. *Forewings* broad, elongate, with convex costa, depressed and obtusely angular apex, termen straightened, tornus rounded; olivaceous dark yellowish green, with a slight steely sheen beyond the cell; a reddish brown shade from the middle of the base blends outward and downward with the olivaceous ground-colour, changing above to rosy red along the costa to two-thirds; a conspicuous, round, rosy red spot lies at the end of the cell, with a dark fuscous spot in its centre, and a narrow even rim of reddish brown—just below it, and again above the tornus, is a faint reddish suffusion; cilia rosy purple, paler at their tips, greenish ochreous at the extreme apex; underside ochreous, with a fuscous shade on the basal half. *Exp. al.* 36 mm. *Hindwings* broader than the forewings, termen slightly sinuate; ochreous, with a slight fuscous suffusion; cilia rosy. *Abdomen* greyish fuscous; anal tuft ochreous. *Legs* ochreous, shaded with rosy; (hind legs missing).

*Type* ♂ (5956 Wlsm. Det. 1908) U.S. Nat. Mus.

*Hab.* PANAMA: CHIRIQUI (*W. Schaus*). Unique.

The curious small, round, ocellate spot, the peculiar colour, and the ornamentally crested thorax should enable this species to be easily recognised.

62. ***Stenoma immersa***, sp. n. (Tab. VI. fig. 20.)

*Antennae* glaucous. *Palpi* whitish cinereous, the median joint smeared with grey on its outer side. *Head* very pale brownish ochreous. *Thorax* brownish ochreous, tinged with purplish grey posteriorly. *Forewings* with the costa arched, apex and tornus rounded, termen straight; brownish ochreous, partly suffused with purplish grey; the first suffusion touches the flexus, is diffused outwards along the cell, branches narrowly to the costa at one-third, and is somewhat intensified on the dorsum at the same distance from the base; the second suffusion, faintly connected with the first above the middle, leaves the costa a little beyond the middle and fading out at the end of the cell, where there is a small round spot, reappears below this and is diffused downward to the dorsum and tornus, whence arises an indistinct, outwardly curved, series of small purplish grey spots reverting to the costa after forming a slight angle below it; cilia pale brownish ochreous, the margin at their base being slightly indicated by a rather brighter ochreous line. *Exp. al.* 21 mm. *Hindwings* brownish grey; cilia pale brownish ochreous, rather more strongly coloured toward the apex. *Abdomen* brownish grey. *Legs* whitish cinereous, tinged with brownish grey.

*Type* ♀ (66195) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Dos Arroyos, 1000 ft. (*H. H. Smith*). Unique.

63. ***Stenoma vaccula***, sp. n. (Tab. VI. fig. 21.)

*Antennae* minutely biciliate; pale cream-ochreous. *Palpi* pale cream-ochreous; terminal joint shorter than median. *Head* pale cream-ochreous. *Thorax* pale fawn-ochreous. *Forewings* with the costa straight beyond the basal bend, apex rounded, termen slightly oblique; pale fawn-ochreous throughout; cilia rather paler; a brownish spot at the end of the cell is very small, but plainly indicated, although

the specimen is in moderate condition. *Exp. al.* 21 mm. *Hindwings* pale tawny brownish grey; cilia dirty whitish. *Abdomen* and *Legs* pale fawn-ochreous.

*Type* ♀ (66196) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: DURANGO: Presidio, 1881 (*A. Forrer*). Unique.

64. ***Stenoma elaeodes*, sp. n.** (Tab. VI. fig. 22.)

*Antennae* whitish ochreous. *Palpi* with the median joint cinnamon-brown externally, paler on its inner side; terminal joint whitish ochreous. *Head* very pale mouse-grey above; face brownish ochreous, streaked with cinnamon-brown at the sides. *Thorax* dark olive-grey. *Forewings* with the costa arched towards the base, apex obtuse, termen straight, tornus rounded; dark olive-grey, with a greenish wash, especially along the costal half and terminal third; the costa narrowly edged with tawny brown, beneath which is a slight lilac reflection; at the lower angle of the cell is a single round white dot; cilia greenish olivaceous. *Exp. al.* 25 mm. *Hindwings* bronzy brownish; cilia brownish ochreous, becoming pale cinereous about the flexus; termen sinuate. *Abdomen* bronzy brownish above, whitish ochreous beneath. *Legs* whitish, the tarsi ochreous.

*Type* ♀ (66197) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac (*H. H. Smith*). Unique.

65. ***Stenoma destillata* Z.**

*Cryptolechia* (3. *Cryptolechia* Z.—b) *destillata* Z. Hor. Soc. Ent. Ross. 13 260 sp. 52, 283–5 sp. 19 (1877)<sup>1</sup>.

*Type* ♂ Mus. Stgr.

*Hab.* AMERICA, C-S. Central America—PANAMA<sup>1</sup>; CHIRIQUI (*Ribbe*)<sup>1</sup>. South America—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*, 68963).

66. ***Stenoma exarata* Z.**

*Cryptolechia exarata* Z. Linn. Ent. 9 378–9 sp. 23 Pf. 3 · 19 (1854)<sup>1</sup>; Wkr. Cat. Lp. BM. 29 713–4 sp. 32 (1864)<sup>2</sup>. *Cryptolechia* (3. *Cryptolechia* Z.—a) *exarata* Z. Hor. Soc. Ent. Ross. 13 260 sp. 41 (1877)<sup>3</sup>.

*Type* ♂ (*Cameta*) Mus. Berol.

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Orizaba, IX. 1907 (*R. Müller*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 2800 ft., 1879 (*G. C. Champion*): GUATEMALA: Guatemala City, at electric light (*J. Rodriguez*): RETALHULEU: Las Mercedes, 3000 ft., IX–X. 1880 (*G. C. Champion*)—COSTA RICA: Candelaria Mts. (*C. A. Underwood*); San José, 4000 ft., X. 1906 (*W. Schaus*). South America—VENEZUELA: Aroa, 1895 (*W. Schaus*)—FRENCH GUIANA: Cayenne, II. 1904 (*W. Schaus*)—Brazil<sup>1–3</sup>: AMAZONS<sup>2</sup>: Ega (*H. W. Bates*)<sup>2</sup>; Villa Nova (*H. W. Bates*)<sup>2</sup>: PARA<sup>1–3</sup>: Santarem (*H. W. Bates*)<sup>2</sup>; Cameta<sup>1</sup>.

67. ***Stenoma ianthina*, sp. n.**

*Antennae* biciliate 1; shining, dark purple. *Palpi* dark purple. *Head* bottle-green; face purple. *Thorax* purple, with greenish reflections. *Forewings* elongate, narrow, of about even width, costa moderately straight, apex obtuse, termen straight, scarcely oblique; unicolorous rich shining purple, with greenish reflections at the extreme base, the costa and dorsum to two-thirds perhaps somewhat more richly coloured

than the remainder of the wing; cilia dark grey. *Exp. al.* 28 mm. *Hindwings* with the costa arched to beyond the middle, termen sinuate; dark tawny grey, with some slight greenish and purplish reflections; a long pencil of pale ochreous hairs from near the base of costa above; cilia dark tawny grey. *Abdomen* and *Legs* dark tawny grey.

*Type* ♂ (66199) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66200) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*).  
Two specimens.

### 68. *Stenoma liniella* Busck.

*Stenoma liniella* Busck Pr. Ent. Soc. Wash. 12 80 (1910)<sup>1</sup>.

*Type* ♂ (13202) US. Nat. Mus. [*PT.* (33868) Mus. Wlsm. BM.]

*Hab.* COSTA RICA<sup>1</sup>: Sixola River (*W. Schaus*)<sup>1</sup>.

### 69. *Stenoma fraternella* Busck.

*Stenoma fraternella* Busck Pr. Ent. Soc. Wash. 12 80 (1910)<sup>1</sup>.

*Type* ♂ (13203) US. Nat. Mus. [*PT.* (33867) Mus. Wlsm. BM.]

*Hab.* COSTA RICA<sup>1</sup>: Juan Viñas (*W. Schaus*)<sup>1</sup>.

### 70. *Stenoma loxotoma* Busck.

*Stenoma loxotoma* Busck Pr. Ent. Soc. Wash. 11 212–3 (1910)<sup>1</sup>.

*Type* ♂ (12809) US. Nat. Mus. [*PT.* (33866) Mus. Wlsm. BM.]

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup> (*H. Schwarz*); Orizaba, VI. (*R. Müller*)<sup>1</sup>.

### 71. *Stenoma aesiocopia*, sp. n. (Tab. VI. fig. 17.)

*Antennae* biciliate 1; cinereous. *Palpi* white, a fuscous band near the apex of the median joint, the terminal joint also tipped with fuscous. *Head* yellowish brown; face whitish. *Thorax* whitish grey, the front and base of the tegulae mouse-grey. *Forewings* ovate, the costa evenly arched, apex and termen convex; pale mouse-grey, with a conspicuous fuscous spot on the cell at one-third, a small fuscous dot in the fold below and a little beyond it, and an obscure dot at the end of the cell; the costa is stained with yellowish brown from base to apex, and a white cloud-like band commencing at the base runs parallel with the costa nearly to the apex, sending an attenuated offshoot along the outer end of the cell, thence pointing inward along the cell; a narrow white band follows the termen from apex to tornus; cilia pale mouse-grey, with an ochreous tinge toward the apex. *Exp. al.* 21 mm. *Hindwings* pale yellowish grey; cilia scarcely paler. *Abdomen* ochreous. *Hind Legs* ochreous, the last four tarsal joints banded with greyish fuscous.

*Type* ♂ (66156) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

### 72. *Stenoma nictitans* Z.

*Mesoptycha nictitans* Z. Linn. Ent. 9 389–90 sp. 1 Pf. 3·26–8 (1854)<sup>1</sup>; Wkr. Cat. Lp. BM. 29

774 sp. 1 (1864)<sup>2</sup>.

*Type* ♂ ♀ (*Para*) Mus. Berol.



*Hab.* AMERICA, C-S. Central America—GUATEMALA: SUCHITEPEQUEZ: San Isidro, 1600 ft., Pacific slope, 10-23 IX. 1880 (*G. C. Champion*)—HONDURAS [? BRITISH]: Limas, V. 1860 (*Brockholes*). South America—COLOMBIA: MAGDALENA: Santa Marta, 1865 (*Bouchard*)—BRITISH GUIANA: Bartica, 24. VI. 1901 (*H. S. Parish*)—FRENCH GUIANA: Cayenne (*Deyrolle*); St. Laurent, Rio Maroni, 11. XI. 1906 (*E. Le Moult*)—BRAZIL: AMAZONS (*Stn. Coll.*): PARA<sup>1-2</sup>: Para<sup>1-2</sup>—BOLIVIA: Yungas de la Paz, 1908 (*Seebold*).

### 73. *Stenoma aterpes*, sp. n. (Tab. VI. fig. 23.)

*Antennae* and *Palpi* pale fawn-grey. *Head* fawn-whitish. *Thorax* fawn-grey. *Forewings* widened outward, the costa evenly arched, apex rounded, termen convex; fawn-grey, with a slight tawny gloss; two small fuscous spots, one at the end of the cell, preceded by a diffused streak of rather paler fawn, which is repeated along the base of the costa; a second in the fold, rather beyond its middle, surrounded by the same paler fawn-colour; a faintly darker shade of tawny fawn-grey crosses the wing, leaving the costa at two-thirds, obtusely angulated outward opposite to the middle of the termen and reverting to the dorsum before the tornus; cilia pale fawn-ochreous, the same colour faintly diffused along the extreme termen. *Exp. al.* 32 mm. *Hindwings* broader than the forewings, slightly sinuate below the apex; dark brownish grey; cilia pale brownish grey. *Abdomen* brownish grey. *Hind Legs* pale brownish cinereous, the last tarsal joint tipped with fuscous.

*Type* ♀ (4657) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: San Juan, 600 ft. (*W. Schaus*). Unique.

### 74. *Stenoma pelodes*, sp. n.

*Antennae* smoky brownish cinereous. *Palpi* whitish ochreous, tinted with brown along the outer side, especially on the basal half of the median joint. *Head* and *Thorax* argillaceous brownish cinereous. *Forewings* argillaceous brownish cinereous, the costa very narrowly pale ochreous throughout; a small elongate dark fuscous spot lies in the middle of the fold, and beyond it, at the end of the cell, is a rather larger spot of the same colour; a series of ten or eleven smaller dark fuscous spots around the margin from before the apex to the tornus, preceded by an outwardly bent indistinct and broken line of faint shade-spots, which is angulated inward below the costa, bending out again to the first of the marginal spots before the apex; cilia pale brownish cinereous. *Exp. al.* 30 mm. *Hindwings* brownish fuscous; cilia paler brownish cinereous. *Abdomen* brownish fuscous. *Legs* brownish cinereous; the hind tibiae densely matted, the tarsi also coarsely clothed with appressed scales.

*Type* ♀ (5957 Wlsm. Det. 1908) US. Nat. Mus. [PTT. (33928, 67079) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.]

*Hab.* Central America—MEXICO: VERA CRUZ (*H. Schwarz*): TABASCO: Teapa, II. (*H. H. Smith*)—PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Three specimens.

### 75. *Stenoma miseta*, sp. n.

*Antennae* pale brownish cinereous. *Palpi* pale brownish cinereous, whiter on their inner sides. *Head* smooth; shining, creamy white. *Thorax* greyish brown. *Forewings* greyish brown, with a peculiar brassy grey (in some lights almost greenish) metallic sheen; some almost obsolete darker markings are scarcely discernible—a small patch on the upper edge of the cell at about one-third; a sinuate streak from the costa beyond the middle, bowed outward and apparently continued to the dorsum at two-thirds, and a somewhat similar sinuate line nearer to the apex, also bowed outward at its middle and produced downward to the tornus; there is also a dark spot at the end of the cell; cilia of the same greyish brown

hue as the slightly darkened lines. *Exp. al.* 23 mm. *Hindwings* brownish fuscous; cilia paler, more greyish. *Abdomen* fuscous. *Legs* pale brownish cinereous.

*Type* ♀ (5959 Wlsm. Det. 1908, *Peralta*) US. Nat. Mus. [*PT.* (33929) Mus. Wlsm. BM.]

*Hab.* AMERICA, C-S. Central America — COSTA RICA: *Peralta*, 2000 ft. (*W. Schaus*). South America—FRENCH GUIANA: St. Jean, Rio Maroni, IV. 1904 (*W. Schaus*). Two specimens.

The specimen from St. Jean, Rio Maroni (♀ 33929), differs only in the presence of a small pale ochreous dot in the apical cilia.

#### 76. *Stenoma palliata*, sp. n. (Tab. VI. fig. 24.)

*Antennae* biciliate 1; pale ochreous. *Palpi* with the median joint bronzy brown externally nearly to its apex, inner side whitish; terminal joint touched with brown at the extreme apex. *Head* white. *Thorax* ochreous, with a brownish fuscous patch above. *Forewings* with the costa gently arched, apex obtuse, termen straight, tornus rounded; pale ochreous, with three pale tawny costal spots—the first small, at one-third; the second larger, about the middle; the last outwardly oblique, somewhat reduplicated, at two-thirds; beyond this a broken tawny brownish line follows the margin around the apex and termen to the tornus, where it converges with a very faint curved line preceding it; a chestnut-brown streak runs along the basal half of the fold, and below it, from the base to one-third, the space below the fold is occupied by a conspicuous dark tawny fuscous dorsal patch; a fuscous dot lies on the cross vein at the end of the cell; terminal cilia shining, rosy grey, a dark purplish shade-line running through them near their base. *Exp. al.* 21 mm. *Hindwings* broader than the forewings, the costa moderately raised, a hair-pencil from near its base above, termen sinuate; brassy brownish, with some bluish grey reflections; cilia shining, pale aeneous, a slightly darker shade lying along their base. *Abdomen* ochreous. *Legs* creamy whitish.

*Type* ♀ (66165) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Teleman, 13–18. V. 1880 (*G. C. Champion*). Unique.

#### 77. *Stenoma scolopacina*, sp. n. (Tab. VI. fig. 25.)

*Antennae* pale brownish ochreous. *Palpi* pale ochreous, the median joint rust-brown externally; the shorter terminal joint tinged with rust-brown at the apex. *Head* somewhat rough above; brownish ochreous. *Thorax* pale rust-brownish, mixed with tawny scales. *Forewings* with the costa slightly arched, apex obtuse, termen straight; pale rust-brownish, with a dorsal shade near the base, two costal shades before the middle, and another from beyond the middle to the apex, together with several obliquely transverse strigulate shades above the middle—all dark tawny brown, the intervening spaces partially suffused with pale tawny, the light chestnut-brown ground-colour showing also a considerable admixture of paler brownish ochreous; a tawny brown transverse spot, at the end of the cell, is preceded by another on the fold, and a narrow marginal shade of the same colour occurs along the termen; cilia brownish ochreous along their base, tawny brown along their middle, their outer ends with a tawny vinous suffusion. *Exp. al.* 32 mm. *Hindwings* broader than the forewings; brownish grey; cilia shining, bronzy brownish. *Abdomen* bronzy brownish. *Hind Legs* ochreous, the spurs and tarsi much suffused with tawny fuscous.

*Type* ♀ (66198) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 1000 ft. (*G. C. Champion*). Unique.

78. *Stenoma sororia* Z.

*Cryptolechia* (3. *Cryptolechia* Z.—a) *sororia* Z. Hor. Soc. Ent. Ross. **13** 259 sp. 32 267–8 sp. 7 Pf. 3·76 (1877)<sup>1</sup>. *Anadasmus soraria* Wlsm. Pr. Z. Soc. Lond. **1897** 100, 182 (1897)<sup>2</sup>.

Type ♂ (102216, Ubaque) Mus. Wlsm. BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: DURANGO: Presidio, 1881 (*A. Forrer*)—GUATEMALA: QUEZALTENANGO: Coatepeque, X-XI. 1880 (*G. C. Champion*): RETALHULEU: Las Mercedes, 3000 ft., IX-X. 1880 (*G. C. Champion*)—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup> (*Ribbe*)<sup>1</sup>; Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*). South America—COLOMBIA<sup>1</sup>: CUNDINAMARCA<sup>1</sup>: Ubaque, 29. III. 1871 (*Baron von Nolcken*)<sup>1</sup>.

79. *Stenoma immunda* Z.

*Cryptolechia immunda* Z. Linn. Ent. **9** 360–1 sp. 6 (1854)<sup>1</sup>; Wkr. Cat. Lp. BM. **29** 711 sp. 17 (1864)<sup>2</sup>. *Cryptolechia* (3. *Cryptolechia* Z.—a) *immunda* Z. Hor. Soc. Ent. Ross. **13** 259 sp. 26 (1877)<sup>3</sup>. *Anadasmus immundus* Wlsm. Pr. Z. Soc. Lond. **1897** 100 sp. 111 (1897)<sup>4</sup>.

Type ♀ (102218, Rio Janeiro) Mus. Wlsm. BM. [*PT.* ♀ (*Orinoco*) Mus. Berol.]

*Hab.* AMERICA, C-S-I. Central America—GUATEMALA: ALTA VERA PAZ: Telemán, 13–18. V. 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). South America—VENEZUELA<sup>1</sup>: Orinoco<sup>1</sup>—ECUADOR: Chimborazo, IX. 1897 (*W. F. H. Rosenberg*)—BRAZIL<sup>1–4</sup>: RIO JANEIRO: Rio Janeiro (*Zeller's Type*): SANTA CATHARINA (*Mus. Wlsm.* 4558). West Indies—TRINIDAD (*W. Schaus*)<sup>4</sup>.

80. *Stenoma lutulenta* Z.

*Cryptolechia* (3. *Cryptolechia* Z.—a) *lutulenta* Z. Hor. Soc. Ent. Ross. **13** 260 sp. 34, 270–1 sp. 9 (1877)<sup>1</sup>.

Type ♂ ♀ (*Sommer Coll.*) Mus. Stgr.

*Hab.* [Central America?]

Zeller described this species from “1 ♂ 2 ♀, grössentheils sehr gut erhalten, aus der Sommer'schen Sammlung, also wohl aus dem wärmeren Amerika, im Museum Staudinger”—these were probably collected in Central America.

81. *Stenoma biseriata* Z.

*Cryptolechia* (3. *Cryptolechia* Z.—a) *biseriata* Z. Hor. Soc. Ent. Ross. **13** 259 sp. 33, 269–70 sp. 8 (1877)<sup>1</sup>.

Type ♂ ♀ (*Sommer Coll.*) Mus. Stgr.

*Hab.* [Central America?]

Zeller described this species from “ein gut erhaltenes ♂, ein sehr zerbrochenes ♀ aus der Sommer'schen Sammlung im Museum Staudinger”—probably collected in Central America.

82. *Stenoma argillacea* Z.

*Cryptolechia* (3. *Cryptolechia* Z.—a) *argillacea* Z. Hor. Soc. Ent. Ross. 13 259 sp. 31, 266–7 sp. 6 (1877)<sup>1</sup>.

Type ♂ Mus. Stgr.

Hab. AMERICA, C-S. Central America — PANAMA<sup>1</sup>: CHIRIQUI (*Ribbe*)<sup>1</sup>. South America—PERU<sup>1</sup>: Chanchamayo (*Thamm*)<sup>1</sup>.

83. *Stenoma mistrella* Busck.

*Stenoma mistrella* Busck Pr. Ent. Soc. Wash. 8 93 (1907)<sup>1</sup>.

Hab. AMERICA, N-C. United States—MISSOURI<sup>1</sup>: ST. LOUIS<sup>1</sup>. Central America — MEXICO: MORELOS: Cuernavaca, VI. (*H. H. Smith*); GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*).

84. *Stenoma symmicta*, sp. n. (Tab. VI. fig. 26.)

*Antennae* biciliate 1; pale brownish grey. *Palpi* white, with a fuscous streak above to beyond the middle of the median joint. *Head* shining white. *Thorax* white, with a pale yellowish brown gloss. *Forewings* with the costa straight, slightly widened outward, apex angular, termen oblique, not sinuate; white, much shaded and mottled with pale yellowish brown, forming a dorsal shade before the fold; a streak along the lower edge of the cell and three costal patches irregularly attenuate downward to the cell—the first, at one-fifth, tending obliquely outward; the second and third, at equal distances, tending obliquely inward, the latter terminating in a fuscous spot at the end of the cell, beyond which is an outwardly bowed line of very faint yellowish brown dots, followed by a diffused shade before the termen; a brownish fuscous dot at the apex is followed by a white patch at the base of the pale aeneous cilia, and a line of the same colour follows the margin below it nearly to the tornus; on the underside the costa is narrowly stained with yellowish ochreous throughout, and two conspicuous fuscous dots lie in a white patch at the extreme apex. *Exp. al.* 17 mm. *Hindwings* brownish grey, sinuate below the apex; cilia pale aeneous, with a paler line running along their base. *Abdomen* yellowish brown. *Hind Legs* white, the tarsi brownish grey above.

Type ♂ (66172) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

Hab. PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). Unique.

85. *Stenoma acrosticta*, sp. n. (Tab. VI. fig. 27.)

*Antennae* biciliate 1; tawny grey, the basal joint somewhat stout, brown. *Palpi* pale tawny grey, the median joint shaded with brown externally. *Head* rough above; pale tawny grey, slightly shaded with brown; face paler. *Thorax* dark brownish fuscous, with tawny grey patches at the side posteriorly, a slightly raised brownish tuft behind; tegulae light brownish. *Forewings* widened outwardly, costa moderately straight, apex abruptly depressed, termen oblique, sinuate, tornus rounded; tawny grey, with a vinous tinge along the middle, a widely diffused shade of light brown along the costa throughout; a narrower, dark brownish fuscous, shade along the dorsum, commencing at about one-fifth from the base, and reaching nearly to the tornus, is diffused and diluted upward and outward on its outer half; a minute blackish dot, a little beyond the middle of the fold, is succeeded by another at the end of the cell, and in line with these, adjacent to the costa, a little before the apex, is a conspicuous black spot whence a narrow line of blackish scales descends to the tornus parallel with the termen, the terminal space beyond it forming a narrow band of silvery grey deprived of the vinous suffusion which precedes it; cilia light brownish. *Exp. al.* 26–28 mm. *Hindwings* broader than the forewings, the termen

sinuate, apex depressed; bronzy greyish brown; the terminal and apical cilia tinged with light brown. *Abdomen* brownish grey. *Legs* brownish grey, the inner sides of the tibiae silvery grey; spurs whitish.

*Type* ♂ (67068, *Senahu*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—GUATEMALA: ALTA VERA PAZ: *Senahu*, 2800 ft., XI. 1879 (*G. C. Champion*). South America—BRAZIL: AMAZONS (*Stn. Coll.*). Two specimens.

86. ***Stenoma completella*** Wkr. (Tab. VI. fig. 28.)

*Cryptolechia completella* Wkr. Cat. Lp. BM. 29 718 sp. 44 (1864)<sup>1</sup>.

*Type* ♂ ♀ (1856: 69) BM.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*). South America—COLOMBIA: CUNDINAMARCA: Bogota (*Birchall*, 7442)—BRAZIL<sup>1</sup>: AMAZONS<sup>1</sup>: Ega (*H. W. Bates*)<sup>1</sup>.

87. ***Stenoma stigmatias***, sp. n. (Tab. VI. fig. 29.)

*Antennae* simple; pale fawn-ochreous, the basal joint whitish ochreous. *Palpi* moderately recurved, whitish ochreous, the terminal joint, which is shorter than the median, shaded broadly at the apex and narrowly at the base with fuscous. *Head* fuscous above, mixed with whitish ochreous at the sides; face whitish. *Thorax* pale ochreous, with two fuscous spots, one behind the other; the tegulae with a broad fuscous streak. *Forewings* with the costa arched toward the base, apex depressed, obtuse, termen moderately straight, tornus rounded; pale fawn-ochreous, becoming whitish ochreous along the basal half of the costa, with six irregular, scarcely disconnected, elongate, fuscous blotches in two slightly curved parallel series; the upper one of the first series running to the base, the lower one lying below the outer half of the fold, with a slight shade below it nearer to the dorsum; the two outer blotches of the second series extend to about two-thirds from the base, the upper and inner one not reaching the costa; beyond these a small, broken, fuscous costal patch is confluent with some costal spots of the same colour, forming the upper end of an apical and terminal series of nine or ten extending to the tornus; cilia brownish ochreous, diluted along their base and on their outer half. *Exp. al.* 23 mm. *Hindwings* broader than the forewings, the apex obtuse, not depressed, termen sinuate; brownish grey; cilia brownish grey, diluted towards their outer extremities and becoming ochreous about the apex. *Abdomen* (missing). *Legs* whitish ochreous.

*Type* ♂ (66164) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Sabo, 6. X. 1879 (*G. C. Champion*). Unique.

88. ***Stenoma renselariana*** Stoll.

= *bahiensis* Perty p. 163 [*nec* Pf. 32·12 = *grandis* Perty]; = \**grandis* Perty Pf. 32·13 [*nec* p. 163–4 = *grandis* Perty].

*Phalaena Tortrix renselariana* Stoll, Crmr. Pap. Exot. 4 114 Pf. 348·H (1781), 251, Essai Syst. Lp. 27 (1782)<sup>1</sup>. *Pyrallis bahiensis* Perty Delect. Animal. Artic. Brasil. Spix-Martius 163 [*nec* Pf. 32·12] (1833)<sup>2</sup>. *Yponomeuta \*grandis* Perty Delect. Animal. Artic. Brasil. Spix-Martius Pf. 32·13 [*nec* p. 163–4] (1833)<sup>2</sup>. *Cryptolechia bahiensis* Z. Linn. Ent. 9 365 sp. 10 (1854)<sup>3</sup>. *Cryptolechia renselariana* Z. Linn. Ent. 9 365–7 sp. 11 Pf. 3·16 (1854)<sup>4</sup>. *Phalaena (Tortrices) renselariana* Sepp Surinaam. Vlind. 3 301–2 Pl. 139 (1855)<sup>5</sup>. *Carpocapsa ? renselariana* Wkr. Cat. Lp. BM. 28 409 sp. 35 (1863)<sup>6</sup>. *Torda ? renselariana* Wkr. Cat. Lp. BM.



28 439 sp. 6 (1863)<sup>7</sup>. *Cryptolechia renselariana* Wkr. Cat. Lp. BM. 29 712 sp. 22 (1864)<sup>8</sup>. *Cryptolechia* \**grandis* (nec Perty) Wkr. Cat. Lp. BM. 29 713 sp. 31 (1864)<sup>9</sup>. *Torda renselariana* Wkr. Cat. Lp. BM. 30 995 (1864)<sup>10</sup>. *Cryptolechia* (5. a) *bahiensis* Z. Hor. Soc. Ent. Ross. 13 260 sp. 59 (1877)<sup>11</sup>. *Cryptolechia* (5. a) *renselariana* Z. Hor. Soc. Ent. Ross. 13 260 sp. 60, 288 sp. 22 (1877)<sup>12</sup>; Mschlr. Verh. ZB. Ges. Wien 31:1881 438 sp. 141 (1882)<sup>13</sup>; Btlr. Tr. Ent. Soc. Lond. 1883 51 (1883)<sup>14</sup>.

*Hab.* AMERICA, C-S. Central America—PANAMA<sup>12-13</sup>: CHIRIQUI (*Ribbe*)<sup>12-13</sup>; Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*). South America—SURINAM<sup>1, 5-7, 13</sup>: ⊕ *Dolichos ensiformis*, III<sup>5, 13</sup>, excl. IV<sup>5</sup>; Paramaribo<sup>13</sup>—FRENCH GUIANA: Cayenne (*Deyrolle*)—BRAZIL<sup>2-4, 8-10</sup>: AMAZONS<sup>8-9</sup>: Ega (*H. W. Bates*)<sup>8-9</sup>: PARA<sup>4</sup>: Para<sup>4</sup>: BAHIA (*Spix-Martius*)<sup>2-3</sup>—PERU: CUZCO: Mts., 1904 (*Garlepp*).

Möschler<sup>(13)</sup> writes “Sepp’s Abbildung ist gut und lasst die Art unzweifelhaft erkennen”—this remark was of course made from acquaintance with one species only of the *renselariana* group: the figure does not agree with any specimen examined in connection with this work, and if in any way reliable it indicates a species distinct from *renselariana* Stoll, *ergates* Wlsm., and *loxogrammos* Z.; but the figure is very rough and is probably an inaccurate attempt to represent *renselariana* Stoll.

Perty<sup>(2-3)</sup> has caused considerable confusion by transposing two figures on Plate 32—the figure representing *Pyralis bahiensis* Perty has been inserted in the named space provided for *Yponomeuta grandis* Perty, while the figure of *Yponomeuta grandis* Perty has been inserted in the place reserved for *Pyralis bahiensis* Perty [i. e. *Stenoma renselariana* Stoll]!

[*Stenoma grandis* Perty has not yet been recorded from Central America, but it will facilitate reference to print the correct synonymy of this species:—

**Stenoma grandis** Perty.

=*grandis* Perty p. 163–4 [nec Pf. 32·13=*renselariana* Stoll (*bahiensis* Perty)]; =\**bahiensis* Perty Pf. 32·12 [nec p. 163=*renselariana* Stoll (*bahiensis* Perty)].

*Yponomeuta grandis* Perty Delect. Animal. Artic. Brasil. Spix-Martius 163–4 [nec Pf. 32·13] (1833)<sup>1</sup>. *Pyralis* \**bahiensis* Perty Delect. Animal. Artic. Brasil. Spix-Martius Pf. 32·12 [nec p. 163] (1833)<sup>1</sup>. *Cryptolechia grandis* Z. Linn. Ent. 9 378 sp. 22 (1854)<sup>2</sup>. *Cryptolechia* \**bahiensis* (nec Perty) Wkr. Cat. Lp. BM. 29 712 sp. 21 (1864)<sup>3</sup>. *Cryptolechia grandis* F. & R. Reise Nov. Zool-Lp. 2 Pf. 139·56 (1875)<sup>4</sup>. *Cryptolechia* (3. *Cryptolechia* Z. -- a) *grandis* Z. Hor. Soc. Ent. Ross. 13 260 sp. 40 (1877)<sup>5</sup>.

*Hab.* South America—FRENCH GUIANA<sup>4</sup>—BRAZIL<sup>1-3, 5</sup>: PIAUHI (*Spix-Martius*)<sup>1-2</sup>: PARA<sup>3</sup>: Para (*H. W. Bates*)<sup>3</sup>; Santarem (*H. W. Bates*)<sup>3</sup>.]

89. **Stenoma ergates**, sp. n. (Tab. VI. fig. 30.)

*Antennae* whitish ochreous. *Palpi* whitish ochreous, a chocolate-brown patch extending along the outer side of the median joint to half its length. *Head* and *Thorax* ochreous, the latter tinged with brownish.

*Forewings* whitish ochreous, slightly tinged with brown between the veins, more noticeably between

veins 9 and 10, and 10 and 11; a distinct ochreous tinge runs along the costa and around the termen, as also along the margins of an elongate chocolate-brown patch, extending to nearly three-fourths the wing-length and occupying the space between the upper edge of the cell and the dorsum; the outer extremity of this patch is rounded above and below, and the ochreous tinge which forms its margin separates it from the dorsum as far as the lower extremity of a slightly outward-curved streak, which divides it into two almost equal parts, extending obliquely from the middle of its upper edge to the dorsum at half the wing-length; cilia whitish ochreous. *Exp. al.* 24 mm. *Hindwings* whitish ochreous, suffused with brownish; cilia whitish ochreous, a slight yellowish tinge along their base. *Abdomen* whitish ochreous, tinged with brownish. *Legs* whitish ochreous.

*Type* ♀ (66154, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ (401224, *Stn. Coll.*): TABASCO: Teapa, II. (*H. H. Smith*).  
Two specimens.

This species is intermediate between *renselariana* Stoll and *loxogrammos* Z., the line intersecting the brown patch being similar to that in the former, whereas in the latter it is not bent; moreover the outer extremity of the same patch is not square as in *renselariana*, but rounded at its upper and lower extremities, while in *loxogrammos* it is rounded at the upper but scarcely at the lower extremity and the dividing line extends much further in that direction than in *ergates*.

#### 90. *Stenoma neanica*, sp. n.

*Antennae* white, with an ochreous tinge. *Palpi*, *Head*, and *Thorax* white. *Forewings* with the costa very slightly convex, apex angular, termen straight; shining white; cilia dark brown-grey, becoming white at the tornus. *Exp. al.* 15–17 mm. *Hindwings* shining white, with a brownish brassy tinge toward the apex; cilia white, becoming brownish at and towards the apex. *Abdomen* white. *Legs* white, the tarsi ferruginous beneath.

*Type* ♂ (2320, *Panama*) Mus. Wlsm. BM. [*PT.* (2321) US. Nat. Mus.]

*Hab.* Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—PANAMA: Panama, 7. X – 26. XI. 1881 (*J. J. Walker*). Three specimens.

This species is much smaller than *leucana* Sepp, but extremely similar in appearance.

#### 91. *Stenoma leucana* Sepp.

n. synn. = *tenera* Z.; = *virginalis* Btlr.; = \**albanus* Wlsm. [nec *albana* F. = *Argyria albana* F. (§ *lacteella* F.)].

*Phalaena* (*Tortrices*) *leucana* Sepp Surinaam. Vlind. 2 127–8 Pl. 60 (1852)<sup>1</sup>. *Cryptolechia tenera* Z. Lin. Ent. 9 364–5 sp. 9 (1854)<sup>2</sup>; 10 153–4 sp. 9 (1855)<sup>3</sup>. *Conchylis* ? *leucana* Wkr. Cat. Lp. BM. 28 360 sp. 108 (1863)<sup>4</sup>. *Cryptolechia tenera* Wkr. Cat. Lp. BM. 29 712 sp. 20 (1864)<sup>5</sup>. *Cryptolechia* (3. *Cryptolechia* Z.—a) *tenera* Z. Hor. Soc. Ent. Ross. 13 259 sp. 29, 263–4 sp. 4 (1877)<sup>6</sup>. *Cryptolechia virginalis* Btlr. Cist. Ent. 2 192 sp. 23 (1877)<sup>7</sup>. *Anadasmus* \**albanus* Wlsm. Pr. Z. Soc. Lond. 1897 100–1 sp. 112 (1897)<sup>8</sup>.

*Types* ♂: *tenera* Z. Mus. Berol.; *virginalis* Btlr. (1881:120) BM.

*Hab.* AMERICA, C–I–S. Central America<sup>6, 8</sup>—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—PANAMA<sup>6, 8</sup>: CHIRIQUI<sup>6, 8</sup>: Chiriqui (*Ribbe*)<sup>6</sup>; Bugaba, 800–1500 ft. (*G. C. Champion*). West Indies—TRINIDAD (*W. J. Kaye*).—South America<sup>1–5, 7–8</sup>—VENEZUELA

(= *COLOMBIA*)<sup>3, 5, 8</sup>: CARACAS<sup>3, 5, 8</sup>: La Guayra<sup>3, 8</sup>—SURINAM<sup>1, 4</sup>: ⊕ *Anona muricata*, III–IV, ex. V<sup>1</sup>—FRENCH GUIANA<sup>8</sup>: Cayenne<sup>8</sup>; St. Laurent, Rio Maroni, 8. XI. 1906 (*E. Le Mout*)—BRAZIL<sup>2, 5, 7–8</sup>: PARA<sup>2, 8</sup>: Para<sup>2, 8</sup>, ⊕ . . . . . ex. IV. 1893 (*A. Schulz*): AMAZONAS<sup>7</sup>: Boaventura, Rio Jutahy, 24. I. 1875 (*J. W. H. Trail*)<sup>7</sup>: SANTA CATHARINA<sup>8</sup>: Santa Catharina<sup>8</sup>—BOLIVIA (*Stgr.* 71180).

For reasons stated at length [Pr. Z. Soc. Lond. 1897 100–1 sp. 112] *Cryptolechia tenera* Z. was sunk as a synonym of *Tinea lacteella* F. [Ent. Syst. 3 (2) 313 sp. 116 (1794)] = *Pyralis albana* F. [Sppl. Ent. Syst 476 sp. 31–2 (1798)], a note by von Hedemann [Stett. Ent. Ztg. 55 300 (1894)] referring Fabricius' Type to the genus *Argyria* Hb. (*Pyralidina*) having been overlooked, Von Hedemann writes: "In der Fabricius'schen Sammlung des Kopenhagener Museums findet sich ein Exemplar dieser Art unter dem Namen *Albana* F. Seine frühere Diagnose der *Lacteella* ist besser als die spätere der *Albana*." It is now obvious that the Fabrician idionym cannot be applied to *Cryptolechia tenera* Z., which should be known as *Stenoma leucana* Sepp; *Cryptolechia virginalis* Btlr. is also a synonym of this species. In Sepp's Surinaamsche Vlinders (2 Pl. 60) the larva of *leucana* is figured as skeletonising the upper side of the leaf of *Anona muricata*, the pale green pupa standing erect on the black larval skin on the upper surface of the leaf; the abdomen of the imago is tinted pale green. The larva was apparently white, with conspicuous single white hairs, and with three longitudinal black stripes, the dorsal less conspicuous than the broader lateral stripes; the head and thorax are black, with four transverse ochreous triangular spots, the apices of each pair meeting above.

### GONIOTERMA Wlsm.

Type: *Phalaena Tortrix burmanniana* Stoll (Wlsm. 1897).

GONIOTERMA Wlsm. Pr. Z. Soc. Lond. 1897 101–2 no. 35 sp. 113–14 (1897); Busck. Pr. US. Nat. Mus. 40 224–6 Pf. 9·24, ·26–9 (1911).

#### 1. *Gonioterma tetragonellum* Wkr.

n. syn. = *isabella* F. & R.

*Cryptolechia tetragonella* Wkr. Cat. Lp. BM. 29 723 sp. 55 (1864)<sup>1</sup>. *Cryptolechia isabella* F. & R. Reise Nov. Zool. Lp. 2 Pf. 139·24 (1875)<sup>2</sup>. *Gonioterma isabella* Wlsm. Pr. Z. Soc. Lond. 1897 101 sp. 113 (1897)<sup>3</sup>.

Types ♂: *tetragonella* Wkr. (1857:20); *isabella* F. & R. Roths. Coll. (*Felder Coll.*) BM.

Hab. AMERICA, C–S–I. Central America—MEXICO: VERA CRUZ: (*Stn. Coll.*); Atoyac, V. (*H. H. Smith*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879–80 (*G. C. Champion*)—PANAMA: CHIRIQUI (*W. Schaus*); David, 1881–2 (*G. C. Champion*). South America<sup>1–3</sup>—COLOMBIA: MAGDALENA: Santa Marta, 1865 (*Bouchard*)—FRENCH

GUIANA: Cayenne (*W. Schaus*)—BRAZIL<sup>1-3</sup>: AMAZONS<sup>1-3</sup>: Ega (*H. W. Bates*)<sup>1</sup>: PARA: Para, ⊕ . . . . ., 18. XI, ex. 2. XII. 1893 (*A. Schulz*). West Indies<sup>3</sup>—TRINIDAD (*W. Schaus*)<sup>3</sup>.

[Walker's Type is very much faded, but it is certainly the same species as that figured by Felder and Rogenhofer: both types were collected by Bates, and show very little trace of the green tint which is so noticeable in specimens in fine condition.—Drnt.]

## 2. *Gonioterma pacatum*, sp. n.

*Antennae* biciliate 1; whitish ochreous. *Palpi* recurved, smooth, acuminate; whitish ochreous. *Head* and *Thorax* whitish ochreous, the head a little paler. *Forewings* with the costa strongly arched near the base, straight beyond, apex obtuse, termen slightly sinuate, not oblique; shining, silky whitish ochreous, with two dark brown costal spots, one at the middle, the other beyond it; there is also a very small dark spot at the base of the costa, and sometimes a minute brown dot at the end of the cell; cilia whitish ochreous. *Exp. al.* 18 mm. *Hindwings* silky, yellowish white; cilia shining, whitish. *Abdomen* whitish ochreous. *Legs* whitish ochreous.

*Type* ♂ (66220) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66221) US. Nat. Mus.]

*Hab.* GUATEMALA: ALTA VERA PAZ: Cahabon, II. 1880 (*G. C. Champion*). Two specimens.

Allied to *burmannianum* Stoll, but smaller; without the dark terminal cilia of the forewings, and lacking an additional small costal spot before the middle—the hindwings are also much paler.

[*Gonioterma burmannianum* Stoll. *Phalaena Tortrix burmaniana* Stoll, Crmr. Pap. Exot. 4 164 Pf. 372 · H (1781), ‡*burmanniana* Stoll Essai 27 (1782). n. syn. = *Cryptolechia tortricella* Wkr. Cat. Lp. BM. 29 723 sp. 54 (1864).—Drnt.]

## 3. *Gonioterma descitum*, sp. n. (Tab. VI. fig. 31.)

*Antennae* shortly biciliate; pale argillaceous. *Palpi* pale whitish ochreous; the median joint strongly suffused with brown externally. *Head* and face densely but smoothly clothed; argillaceous. *Thorax* pale tawny argillaceous, stained with rust-brown posteriorly. *Forewings* pale tawny argillaceous, with three rust-brown costal spots—one, small, at one-fourth; the second, larger, at the middle; the third, largest, at the outer fourth; from the last a slender line of scarcely separate brown spots descends to the tornus, much curved outward toward the termen; a brown shade is diffused from the flexus outward, crossing the fold, and is followed by a narrower brown shade arising before the middle of the dorsum and running obliquely backward nearly to the first costal spot; a faintly indicated similar shade curves outward from the second costal spot, but is lost before attaining the dorsum; a series of small narrow brown spots extends along the termen at the base of the pale tawny argillaceous cilia. *Exp. al.* 25 mm. *Hindwings* and cilia yellow. *Abdomen* yellowish ochreous. *Legs* brownish ochreous, the hind tarsi whitish.

*Type* ♂ (66215) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800–1000 ft., 1881–3 (*G. C. Champion*). Unique.

#### 4. *Gonioterma quadratellum* Wkr. (Tab. VI. fig. 32.)

n. syn. = *hebes* Dgn.

*Cryptolechia quadratella* Wkr. Cat. Lp. BM. 29 715-6 sp. 39 (1864)<sup>1</sup>. *Mesoptycha hebes* Dgn. Ann. Soc. Ent. Belg. 49 89-90 (1905)<sup>2</sup>.

Type ♀ (1853:27) BM.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). South America—COLOMBIA<sup>2</sup>: CAUCA: Micay, VIII. 1896<sup>2</sup>—BRAZIL<sup>1</sup>: PARA<sup>1</sup>: Tapajos (*H. W. Bates*)<sup>1</sup>.

[M. Paul Dognin has kindly enabled me to compare the Type of *hebes* Dgn. (♂ *Micay*, 6569 Drnt. Det. 1911) with *quadratella* Wkr. Walker records his Type of *quadratella* as a ♂—it is a ♀ with trifid frenulum, extruded ovipositor, and slightly ciliate antennae. There is some slight variation in the distinctness of the darker markings in the specimens examined, but *hebes* and *quadratella* appear to be sexes of the same species, agreeing in the dark cilia of the forewings becoming paler at the tornus, and in the colouration of the underside.—Drnt.]

#### 5. *Gonioterma alsiosum*, sp. n. (Tab. VI. fig. 33.)

*Antennae* shortly biciliate (♀); testaceous, the basal joint paler. *Palpi*: median and terminal joints about equal in length; very pale testaceous, the median joint darkened on the outer side. *Head* and *Thorax* testaceous, the tegulae with a bluish suffusion. *Forewings* with the termen slightly sinuate; testaceous, with a patch of bluish grey suffusion beyond the end of the cell (only apparent in some lights), not reaching the termen or costa; before it, at the end of the cell, is a single round blackish spot between veins 5 and 6; cilia smoky grey. *Exp. al.* 35 mm. *Hindwings* tawny grey, pale ochreous along the costa; cilia shining, pale cinereous, with a rather ochreous shade-line along their base. *Abdomen* hoary greyish. *Legs* tawny grey.

Type ♀ (66217) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). Unique.

#### 6. *Gonioterma melema*, sp. n. (Tab. VI. fig. 34.)

*Antennae* biciliate 1; testaceous. *Palpi* tawny testaceous, inclining to ochreous on their inner sides. *Head* pale ochreous. *Thorax* tawny testaceous. *Forewings* tawny testaceous at the base, rather shining brownish ochraceous toward the costa and on the outer two-thirds, with three meandering transverse streaks of purplish grey; the first commencing on the costa at one-third and following a wavy course to the dorsum before the middle; the second from the middle of the costa, obliquely outward to the end of the cell, descending thence nearly straight to the dorsum beyond the middle; the third half-way between this and the apex, less oblique at its costal origin, outwardly curved toward the termen about its middle, and approaching the second in its descent to the dorsum before the tornus—these streaks are very ill-defined; a somewhat distinct fuscous spot lies at the end of the cell, just within the angle of the second wavy line; an indistinct series of purplish grey dots follows the termen at the base of the shining testaceous cilia. *Exp. al.* 22 mm. *Hindwings* dull brownish cinereous; cilia shining, brownish cinereous. *Abdomen* brownish cinereous. *Legs* pale brownish cinereous.

Type ♂ (66218) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). Unique.



### 7. *Gonioterma lysalges*, sp. n. (Tab. VI. fig. 35.)

*Antennae* pale testaceous; the basal joint slightly enlarged. *Palpi* recurved, smooth, the median joint longer, but scarcely stouter than the acute terminal joint, which is high above the vertex; pale testaceous. *Head* shining, whitish. *Thorax* pale testaceous. *Forewings* with the costa roundly arched from base to middle, and somewhat elevated again toward the rectangular apex; termen straight, tornus rounded, broadly tortriciform; pale testaceous, with a slight tawny gloss, a small brown costal spot on the summit of the arched portion of the wing followed by a larger spot of the same colour on the middle of the costa where the margin is most depressed; cilia brownish, with a pale ochreous line along their base. *Exp. al.* 15 mm. *Hindwings* (much damaged) brownish testaceous. *Legs* (broken).

*Type* ♀ (66216) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*).  
Unique.

The type is unfortunately in poor condition, but the species is worthy of description, its shape and general appearance reminding one of a common form of the *Tortricidae*.

### Fam. 7. AGERIADAE\*.

AGERIIDAE Druce Biol. C-Am. Ins. Lp-Het. 1 28–32 Pl. 5 (1883), 33–4 (1884): 2 321–6 Pl. 68 (1896), Pl. 69 (1897): Ann-Mag. NH. (6 s.) 4 78–82 (1889): 9 275–6 (1892).

#### TINTHIA Wkr.

=\**PARANTHRENE* (p.) Hb. + HS. (*nec* Hb. + Newm.); *PARANTHRENA* HS.; †*PARATHRENE* Busck;  
=ZENODOXUS Grt. & Rbnsn.; =MICROSPHECIA Brtl.

Type 1: *Sphinx tineiformis* Espr., Hb. (HS. 1846; Brtl. 1912).

MICROSPHECIA Brtl. =\**PARANTHRENE* (p.) Hb. Verz. Schm. 128 sp. 1370–3 (1820). *PARANTHRENA* HS. SB. Schm. Eur. 2 58–9 no. 42 sp. 1–2 (1846). *PARANTHRENE* Z. Isis 1847 418–9 sp. 79 (1847); Stgr-Rbl. Cat. Lp. Pal. 1 406 no. 751 sp. 4634–6 (1901); Btmlr. Mem. Am. Mus. NH. 1 314–6 tf. 24 Pf. 32·12–15 (1901); Dyar Bull. US. Nat. Mus. 52 371 sp. 4258–62 (1902). †*PARATHRENE* Busck Pr. Ent. Soc. Wash. 11 117, 118 no. 12 (1909). *PARANTHRENE* Splr. Schm. Eur. 2 306 no. 2 sp. 1–2 Pf. 75·22–3, 79·54–5 (1910). MICROSPHECIA Brtl., Seitz Grossschm. Pal. 2 414 no. 11 Pf. 52·f (1912).

Herrich-Schäffer, Zeller, and subsequent writers having overlooked Newman's paper [Ent. Mag. 1 73, 83–4 (1832)] adopted *Paranthrene* for *tineiformis* Hb., but following Newman the type must be regarded as *tabaniformis* Rtmbg. (= \**vespiformis* Nwmn.).

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\* [When the earlier volumes of the "Biologia" were published the *Aegeriadae* had not been removed from the neighbourhood of the *Sphingidae*; more recent studies have shown that this family should be transferred to the *Tineina*, and we therefore, for convenience of reference, again enumerate the Mexican and Central American forms under that group. Mr. Busck has recently published a tabulation of the American genera [Pr. Ent. Soc. Wash. 11 115–18 (1909)], which has been most useful; but the material available is insufficient, sometimes in imperfect condition, rendering it often impossible to classify the specimens except on broad lines and in a more or less arbitrary manner.—Ed.]

Type 2: *Tinthia varipes* Wkr. (Wkr. 1864).

TINTHIA Wkr. Cat. Lp. BM. 31 23-4 (1864); Btlr. Ann-Mag. NH. (4 s.) 14 408 (1874); Hmsn. Fn. Br-Ind. Moths 1 188, 199-200 no. 11 tf. 127 sp. 379 (1892).

*Tinthia varipes* Wkr. and *variegata* Wkr. agree with *tineiformis* Hb. in having FW: 7-8 coincident, to costa; HW: 3 closely approximate to 2, remote from 4. *Melittia* Hb. has the neuration of the hindwings as in *Tinthia*, but FW: 7-8 are stalked.

Type 3: *Zenodoxus maculipes* Grt. & Rbnsn. (Grt. & Rbnsn. 1868).

ZENODOXUS Grt. & Rbnsn. Tr. Am. Ent. Soc. 2 183-4 (1868); Btmlr. Mem. Am. NH. 1 222, 225 (1901). \**PARANTHRENE* Btmlr. Mem. Am. Mus. NH. 1 314-6 tf. 24 Pf. 32·12-15 (1901).

### 1. *Tinthia tabogana* Druce.

*Aegeria tabogana* Druce Biol. C-Am. Ins. Lp-Het. 1 31 sp. 11 Pf. 5·16 (1883)<sup>1</sup>.

Type ♀ (Godm-Salv. Coll.) BM.

Hab. PANAMA<sup>1</sup>: TABOGA I<sup>p</sup>: V. 1883 (*G. C. Champion*)<sup>1</sup>.

### 2. *Tinthia manoba* Druce.

*Sincara manoba* Druce Ann-Mag. NH. (6 s.) 4 82 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 326 sp. 6 Pf. 69·21 (1896-7)<sup>2</sup>.

Type ♀ (Godm-Salv. Coll.) BM.

Hab. MEXICO<sup>1-2</sup>: TABASCO<sup>1-2</sup>: Teapa, II. 1888 (*H. H. Smith*)<sup>1-2</sup>.

### *Tinthia* sp.? Druce.

*Sincara* sp.? Druce Biol. C-Am. Ins. Lp-Het. 2 326 sp. 7 (1896)<sup>1</sup>.

Type ♂ (Godm-Salv. Coll.) BM.

Hab. MEXICO<sup>1</sup>: TABASCO<sup>1</sup>: Teapa (*H. H. Smith*)<sup>1</sup>.

### MELITTIA Hb.

Type: *Sesia chalciformis* F. [= *anthedoniformis* Hb. nn. (§ *bombyliiformis* Cmr. Pf. 200·C); Hb. 1820.]

MELITTIA Hb. Verz. Schm. 128 sp. 1374 (1820); Ztr. Smlg. Exot. Schm. 3 17 sp. 227 Pf. [78]·453-4 (1825); Wkr. Cat. Lp. BM. 8 8, 66-70 no. 10 sp. 1-10 (1856): 31 16-19 (1864); Bdv. HN. Ins. Lp-Het. 1 468-79 (1874); Druce Biol. C-Am. Ins. Lp-Het. 1 32 sp. 1-3 (1883): 2 324-5 (1896): Ann-Mag. NH. (6 s.) 4 81 (1889): 9 276 (1892); Hmsn. Fn. Br-Ind. Moths 1 188, 202-5 no. 15 sp. 384-95 tf. 203·131 (1892); Btmlr. Mem. Am. Mus. NH. 1 223, 224, 231-6 tf. 232·8 Pl. 29·1-5 (1901); Dyar Bull. US. Nat. Mus. 52 364 sp. 4162-6 (1902); Busck Pr. Ent. Soc. Wash. 11 116, 117, 118 no. 14 (1909).

Boisduval and Hampson both attribute *Melittia* to Walker, but Walker adopted the genus from Hübner, giving the reference to the 'Verzeichniss.' Hampson and

Beutenmüller agree in citing *satyriniformis* Hb. as the Type of *Melittia*, but this monotypical genus was founded on *§bombyliiformis* Crmr., which Hampson (Fn. Br-Ind. Moths 1 204 sp. 394) identifies as *chalciformis* F.—this identification renders unnecessary Hübner's neonym *anthedoniformis*.

### 1. *Melittia satyriniformis* Hb.

=*cucurbitae* Harris.<sup>10</sup>; =*ceto* Wstwd.<sup>9</sup>; =*pulchripes* Wkr.<sup>6</sup>; =*amoena* H. Edw.<sup>10</sup>.

*Melittia satyriniformis* Hb. Ztr. Smlg. Exot. Schm. 3 no. 227 p. 17 Pf. [78] · 453-4 (1825)<sup>1</sup>.  
*Aegeria cucurbitae* Harris New Engl. Farmer 7 33 (1828)<sup>2</sup>. *Trochilium ceto* Wstwd. Cab. Or. Ent. 62 Pl. 30 · 6 (1848)<sup>3</sup>. *Melittia pulchripes* Wkr. Cat. Lp. BM. 8 67 sp. 3 (1856)<sup>4</sup>.  
*Melittia amoena* H. Edw. Pap. 2 53-4 (1882)<sup>5</sup>. *Melittia satyriniformis* Druce Biol. C-Am. Ins. Lp-Het. 1 32 sp. 1 (1882)<sup>6</sup>. *Melittia ceto* Druce Biol. C-Am. Ins. Lp-Het. 1 32 sp. 2 (1883)<sup>7</sup>; H. Edw. Pap. 3 157 (1884)<sup>8</sup>. *Melittia satyriniformis* Druce Biol. C-Am. Ins. Lp-Het. 2 324 (1896)<sup>9</sup>; Btmlr. Jr. N-Y. Ent. Soc. 5 34-5 (1897)<sup>10</sup>; Mem. Am. Mus. NH. 1 229, 230, 232-4 tf. 232 · 8 Pf. 29 · 1 ♀ (1901)<sup>11</sup>; Dyar Bull. US. Nat. Mus. 52 364 sp. 4162 (1902)<sup>12</sup>.

Types: ♂ *ceto* Wstwd.; *pulchripes* Wkr. BM.

Hab. AMERICA, N-C-S. Canada<sup>11</sup>—United States<sup>1-3, 5-7, 10-12</sup>: ⊕ *Cucurbitus* spp. ♂ IV-VIII<sup>11</sup>. Central America<sup>6-9, 11</sup>—MEXICO<sup>6, 8-9, 11</sup>: DURANGO<sup>9</sup>: Durango City (*Becker*)<sup>9</sup>; VERA CRUZ<sup>9</sup>: Atoyac (*Schumann*)<sup>9</sup>; Coatepec (*Brooks*)<sup>9</sup>; Jalapa (*W. Schaus*)<sup>8</sup>; Jalisco (*Schumann*)<sup>9</sup>: GUERRERO<sup>9</sup>: Acapulco (*H. H. Smith*)<sup>9</sup>; Amula (*H. H. Smith*)<sup>9</sup>; Chilpancingo (*H. H. Smith*)<sup>9</sup>: YUCATAN<sup>6</sup>: Valladolid (*Gaumer*)<sup>6</sup>—GUATEMALA<sup>6-7, 11</sup>: BAJA VERA PAZ<sup>6-7</sup>: San Gerónimo (*G. C. Champion*)<sup>6-7</sup>: PANAMA<sup>7, 11</sup>: CHIRIQUI<sup>7</sup>: Volcan de Chiriqui, 2000-3000 ft. (*G. C. Champion*)<sup>7</sup>. South America<sup>4, 6, 8, 11</sup>—VENEZUELA (*D. Dyson*)<sup>4, 6</sup>—BRAZIL<sup>4, 6, 11</sup>: AMAZONS<sup>4, 6, 11</sup>: Para (*H. W. Bates*)<sup>4</sup>—ARGENTINA<sup>8, 11</sup>: Buenos Ayres (*C. Berg*)<sup>8</sup>.

### 2. *Melittia butleri* Druce.

*Melittia butleri* Druce Biol. C-Am. Ins. Lp-Het. 1 32 sp. 3 Pf. 5 · 15 (1883)<sup>1</sup>: 2 324 (1896)<sup>2</sup>.

Type ♂ ♀ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: OAXACA<sup>1-2</sup>: Oaxaca (*Sallé*)<sup>1</sup>: GUERRERO<sup>2</sup>: Omilteme, 8000 ft. (*H. H. Smith*)<sup>2</sup>.

### 3. *Melittia smithi* Druce.

*Melittia smithi* Druce Ann-Mag. NH. (6 s.) 4 81 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 324 sp. 4 Pf. 69 · 17 (1896-7)<sup>2</sup>.

Type ♀ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: GUERRERO<sup>1-2</sup>: Rio Papagaio, 1200 ft. (*H. H. Smith*)<sup>1-2</sup>; Dos Arroyos, 1000 ft. (*H. H. Smith*)<sup>1-2</sup>, IX-X. 1888<sup>1-2</sup>.

4. *Melittia grandis* Strecker.= *beckeri* Druce<sup>6</sup>.

*Trochilium grande* Strecker Can. Ent. **13** 156 (1881)<sup>1</sup>. *Melittia grandis* Grt. New Check-List N-Am. Moths 11 sp. 2 (1882)<sup>2</sup>. *Melittia beckeri* Druce Ann-Mag. NH. (6 s.) **9** 276 (1892)<sup>3</sup>. *Melittia grandis* Btmlr. Bull. Am. Mus. NH. **8** 114-15 (1896)<sup>4</sup>. *Melittia beckeri* Druce Biol. C-Am. Ins. Lp-Het. **2** 325 sp. 5 Pf. **69**·18 (1896-7)<sup>5</sup>. *Melittia grandis* Btmlr. Bull. Am. Mus. NH. **12** 149, 151 (1899)<sup>6</sup>; Mem. Am. Mus. NH. **1** 232, 235-6 Pf. **29**·4 ♀ (1901)<sup>7</sup>; Dyar Bull. US. Nat. Mus. **52** 364 sp. 4165 (1902)<sup>8</sup>.

Types: *beckeri* Druce ♂ (Godm-Salv. Coll.) BM.

*Hab.* AMERICA, N-C. United States<sup>1-2, 4, 6-8</sup>—ARIZONA<sup>4, 6-8</sup>—TEXAS<sup>1, 4, 6-8</sup>. Central America<sup>3, 5-7</sup>—MEXICO<sup>3, 5-7</sup>: DURANGO<sup>3, 5</sup>: Durango City (*Becker*)<sup>3, 5</sup>.

## ALCATHOE H.Edw.

= †*ALCATHOE* Dyar.

ALCATHOE H.Edw. Pap. **2** 53 (1882); Btmlr. Mem. Am. Mus. NH. **1** 222, 239-41 ff. 239·11 Pf. **29**·7 ♂-8 ♀, **33**·11 ♂ (1901). †*ALCATHOE* Dyar Bull. US. Nat. Mus. **52** 364 sp. 4170-1 (1902). ALCATHOE Busck Pr. Ent. Soc. Wash. **11** 116, 117 no. 2 (1909).

1. *Alcathoe korites* Druce.

*Sinnina korites* Druce Biol. C-Am. Ins. Lp-Het. **1** Pf. **5**·22 (XI. 1883)<sup>1</sup>. *Sannina korites* Druce Biol. C-Am. Ins. Lp-Het. **1** 34 sp. 2 (VI. 1884)<sup>2</sup>. *Alcathoe korites* Btmlr. Mem. Am. Mus. NH. **1** 230, 241 (1901)<sup>3</sup>. *Alcathoe korites* Dyar Bull. US. Nat. Mus. **52** 364 sp. 4172 (1902)<sup>4</sup>.

Type ♀ (San Gerónimo; Godm-Salv. Coll.) BM.

*Hab.* AMERICA, N-C. United States<sup>3-4</sup>—COLORADO, SW.<sup>3-4</sup>: Durango<sup>3</sup>, ⊕ *rad.* *Clematis ligustrifolia*<sup>3</sup>. Central America<sup>1-4</sup>—MEXICO<sup>4</sup>—GUATEMALA<sup>2-3</sup>: BAJA VERA PAZ<sup>2</sup>: San Gerónimo (*G. C. Champion*)<sup>2</sup>—COSTA RICA<sup>2-3</sup>: Rio Sucio (*H. Rogers*)<sup>2</sup>.

2. *Alcathoe proserpina* Druce.

*Aegeria proserpina* Druce Biol. C-Am. Ins. Lp-Het. **1** 31 sp. 13 Pf. **5**·13 (1883)<sup>1</sup>: **2** 323 (1896)<sup>2</sup>.

Type ♀ (San Gerónimo; Godm-Salv. Coll.) BM.

*Hab.* Central America—MEXICO<sup>2</sup>: TABASCO<sup>2</sup>: Teapa (*H. H. Smith*)<sup>2</sup>—GUATEMALA<sup>1</sup>: BAJA VERA PAZ<sup>1</sup>: San Gerónimo (*G. C. Champion*)<sup>1</sup>—PANAMA<sup>2</sup>: TABOGA I<sup>D</sup> (*J. J. Walker*)<sup>2</sup>.

3. *Alcathoe senta* Druce.

*Aegeria senta* Druce Biol. C-Am. Ins. Lp-Het. **1** 30 sp. 2 Pf. **5**·1 (1883)<sup>1</sup>.

Type ♂ (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA<sup>1</sup>: VERA PAZ<sup>1</sup>: Panzos, V. 1880 (*G. C. Champion*)<sup>1</sup>.  
BIOL. CENTR.-AMER., Heter., Vol. IV., February 1913.

## TARSOPODA Btlr.

Type: *Tarsopoda remipes* Btlr. (Btlr. 1874).

TARSOPODA Btlr. Ann-Mag. NH. (4 s.) 14 410 (1874); Druce Anu-Mag. NH. (6 s.) 4 81 (1889): Biol. C-Am. Ins. Lp-Het. 2 326 Pf. 69·22 (1896).

1. *Tarsopoda? marcia* Druce.

*Tarsopoda marcia* Druce Ann-Mag. NH. (6 s.) 4 81 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 326 sp. 1 Pf. 69·22 (1896-7)<sup>2</sup>.

Type ♂ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: GUERRERO<sup>1-2</sup>: Dos Arroyos, 1000 ft., IX. 1888 (*H. H. Smith*)<sup>1-2</sup>.

## AEGERIA F.

=\**SESIA* (F.; Lspr., Schrk.) HS.; =*TROCHILIUM* (Scp.) Nwmn., Wstwd.; =*BEMBECIA* Hb.; =*SYNANTHEDON* Hb.; =*CONOPIA* Hb.; =*PYROPTERON* Nwmn. (†*PROPTERON* Crt.); =*PYRRHOTAENIA* Grt.; =*CARMENTA* H.Edw.; =*SANNINOIDEA* Btmlr.; \**SINCARA* (*nec* Wkr.) Druce (†*SYNCARA* Druce); =\**SANNINA* (*nec* Wkr.) Druce (†*SINNINA* Druce); =*THAMNOSPHECIA* Splr.; =*DIPSOSPHECIA* Splr.

Type 1: *Sphinx ichneumoniformis* S-D., F.

AEGERIA F. Illiger's Mag. Insk. 6 288 no. 45 (1807); Oken Lehrb. Naturg. Zool. 1 747-9 no. 3 (1815). AEGERIA F. (B. AEGERIA F.) Oken Lehrb. Naturg. Zool. 1 748-9 (1815). BEMBECIA Hb. Verz. Schm. 128-9 sp. 1375-90 (1820); Nwmn. Ent. Mag. 1 73, 76-7 no. 6 sp. 1 (1832); Wstwd. Syn. Gn. Br. Ins. 89 (1840). AEGERIA Druce Biol. C-Am. Ins. Lp-Het. 1 29-32 Pl. 5 (1883); 2 321-4 Pl. 68-9 (1896-7); Ann-Mag. NH. (6 s.) 4 78-81 (1889); 9 275-6 (1892). \**SYNCARA* Druce Biol. C-Am. Ins. Lp-Het. 1 Pl. 5·18-20 (1883). \**SINCARA* Druce Biol. C-Am. Ins. Lp-Het. 1 33 sp. 1-3 (1884); Ann-Mag. NH. (6 s.) 4 81-2 (1889); Biol. C-Am. Ins. Lp-Het. 2 325-6 sp. 4-7 (1896). \**SINNINA* Druce Biol. C-Am. Ins. Lp-Het. 1 Pf. 5·21-2 (1883). \**SANNINA* Druce Biol. C-Am. 1 33-4 sp. 1-2 (1883). *DIPSOSPHECIA* Splr. Schm. Eur. 2 316-17 no. 7 sp. 1-5 Pf. 20·24, ·26, 79·18-20 (1910); Brtl., Seitz Grossschm. Pal. 2 389-97 no. 7 Pf. 50·g-i, 51·c,f, 52·a-b,d (1912).

*Trochilium* Scp. was published without Types, but a careful study of the description certainly seems to support the decision of Laspeyres [Ses. Europ. 1-2 (1801)] and Oken (1815) that Scopoli's genus was founded on the Tineid "Clearwings," the "Bee-Hawks" (*bombylifomis* and *fuciformis*) being included in *Macroglossum* Scp.

Oken [Lehrbuch Naturg. 747-8 (1815)] redescribed *Aegeria* [F.] dividing it into two subgenera:—

a. *Trochilium*, "Rüssel kurz," to which is assigned as Type *apiformis* [Cl.], *bembeciformis* [Hb.] being associated with it.

b. *Aegeria*, "Rüssel lang," including about 24 species, of which six are prominently mentioned, but the Type must be either *ichneumoniformis* (S-D.) F., or *vespiformis* (L.) F., after the elimination of *apiformis* (L.) F. by Oken—*ichneumoniformis* S-D., F., should be cited as Type, the determination of this species being undoubted.



Type 2: *Sphinx myopiformis* Bkh. (= \**culiciformis* Hb.; Hb.).

CONOPIA Hb. = \**SESIA* (F.) Hb. Tent. 1 (1806). CONOPIA Hb. Verz. Schm. 129-30 sp. 1395-8 (1820); Nwmn. Ent. Mag. 1 73, 81-3 no. 3 sp. 1-3 (1832); Wstwd. Syn. Gn. Br. Ins. 89 (1840).

Type 3: *Sphinx oestriformis* Rtmbg. (Nwmn. 1832).

SYNANTHEDON Hb. Verz. Schm. 129 sp. 1391-4 (1820); Nwmn. Ent. Mag. 1 73, 77-8 no. 1 sp. 1 (1832); Wstwd. Syn. Gn. Br. Ins. 89 (1840); Brtl., Seitz Grossschm. Pal. 2 381-9 no. 6 Pf. 50·g, 51·c-f, 52·a-b (1912).

Type 4: *Sphinx chrysidiformis* Espr., Vill. (Nwmn. 1832).

PYROPTERON Nwmn. Ent. Mag. 1 73, 75-6 no. 5 sp. 1 (1832); [†*PROPTERON* Crt. Guide (2 edn.) 175 (1837)]; Wstwd. Syn. Gn. Br. Ins. 89 (1840).

Type 5: *Sphinx culiciformis* L. (Crt. 1825; Splr. 1910).

THAMNOSPHECIA Splr. = \**AEGERIA* (F.) Crt. Br. Ent. 2 expl. Pl. 53 (1825). THAMNOSPHECIA Splr. Schm. Eur. 2 308 (1910).

Curtis' citation cannot be accepted as *culiciformis* L. was not one of the original types of *Aegeria* F.

Type 6: *Sphinx tipuliformis* L. (Wstwd. 1840; Hmsn. 1892).

\**TROCHILIUM* (Sep.) Nwmn. Ent. Mag. 1 73, 78-81 no. 2 sp. 1-4 (1832); Wstwd. Syn. Gn. Br. Ins. 89 (1840); Meyr. HB. Br. Lp. 563-7 no. 2 sp. 1-11 (1895). \**SESIA* (F.) HS. SB. Schm. Eur. 2 58, 62-80 sp. 7-45 Pl. 1-10 (1846); Stgr. Stett. Ent. Ztg. 17 199-224, 257-88, 323-33 no. 3 sp. 9-53 (1856); Stgr-Wk. Cat. Lp. Eur. 39-43 no. 53 sp. 506-566 (1871); Hmsn. Fn. Br. Ind. Moths 1 188, 196-8 no. 8 sp. 368-75 tf. 197·124 (1892); Stgr-Rbl. Cat. Lp. Pal. 1 401-6 no. 749 sp. 4545-4631 (1901); Btmlr. Mem. Am. Mus. NH. 1 222, 223-5, 275-313 tf. 276·22 Pl. 31-3, 35-6 (1901); Dyar Bull. US. Nat. Mus. 52 367-71 sp. 4199-4256 (1902); Busck Pr. Ent. Soc. Wash. 11 117-18 no. 4 (1909).

Fabricius [Gn. Ins. 159 (1777)] wrote of his genus *Sesia*: "Victus larvae e foliis plantarum, imaginis e nectare florum," thus excluding the wood-boring Tineids, for the reception of which he described the genus *Aegeria* F. (1807), and limiting the Type of *Sesia* to *stellatarum* L. and *fuciformis* L., F., the only species with whose larvae he was acquainted. Goeze [Ent. Btr. Lin. Nat. Ges. 3 (2) 133 (1780)] and Cuvier [Tabl. Element. NH. 593 (1798)] both regarded *stellatarum* as the Type of *Sesia* F.; but Laspeyres [Ses. Europ. (1801)] and Schrank [Fn. Boica 2 (1) 153-4, 232-5 no. 203 sp. 1397-1402 (1801)] referred all the wood-boring Tineids to *Sesia*, in which they have been followed by many writers.

Type 7: *Aegeria* (*Pyrrhotaenia*) *floridensis* Grt. (Grt. 1875).

AEGERIA F. (PYRRHOTAENIA Grt.) Grt. Can. Ent. 7 174 (1875); Btmlr. Mem. Am. Mus. NH. 1 275 (1901).

Type 8: *Aegeria pyralidiformis* Wkr. (H. Edw. 1881).

CARMENTA H. Edw. Pap. 1 184 (1881); Btmlr. Mem. Am. Mus. NH. 1 225, 275 (1901).

Type 9: *Aegeria exitiosa* Say (Btmlr. 1896).

SANNINOIDEA Btmlr. Bull. Am. Mus. NH. 8 126-7 (1896): Mem. Am. Mus. NH. 1 222, 265-72 tf. 265·20 Pf. 30·16-21, 33·14 (1901); Dyar Bull. US. Nat. Mus. 52 367 sp. 4194-6 (1902). †SANNINOIDEA Busck Pr. Ent. Soc. Wash. 11 117, 118 (1909).

It is probable that some of the types enumerated above represent genera regarded as distinct under other names in America, but the Central American material is not in condition to justify subdivision beyond the indication of two groups differing in the clothing of the palpi.

[1. SYNANTHEDON Hb.: Palpi nearly smooth.]

### 1. *Aegeria tryphoniformis* Wkr.

*Aegeria tryphoniformis* Wkr. Cat. Lp. BM. 8 48 sp. 84 (1856)<sup>1</sup>. *Sesia tryphoniformis* Bdv. HN. Lp-Het. 1 443 sp. 22 (1874)<sup>2</sup>. *Aegeria tryphoniformis* Druce Biol. C-Am. Ins. Lp-Het. 1 29-30 sp. 1 Pl. 5·3 (1883)<sup>3</sup>: 2 321 (1896)<sup>4</sup>.

Type ♂ (1855:54, *Villa Nova*) BM.

Hab. AMERICA, C-S. Central America<sup>3-4</sup>—MEXICO<sup>4</sup>: GUERRERO<sup>4</sup>: Tierra Colorada (*H. H. Smith*)<sup>4</sup>: TABASCO: Teapa (*H. H. Smith*)<sup>4</sup>: GUATEMALA<sup>3</sup>: VERA PAZ<sup>3</sup>: Panzos (*G. C. Champion*)<sup>3</sup>—PANAMA<sup>3</sup>: CHIRIQUI<sup>3</sup>: Bugaba, 800-1500 ft. (*G. C. Champion*)<sup>3</sup>. South America<sup>1-3</sup>—BRAZIL<sup>1-3</sup>: AMAZONS<sup>1-3</sup>: Villa Nova (*H. W. Bates*)<sup>1-3</sup>; Para (*H. W. Bates*)<sup>1-3</sup>.

### 2. *Aegeria mardia* Druce.

*Aegeria mardia* Druce Ann-Mag. NH. (6 s.) 9 275-6 (1892)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 321 sp. 1<sup>a</sup> Pf. 69·7 (1896-7)<sup>2</sup>.

Type ♂ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: DURANGO<sup>1-2</sup>: Durango City (*Becker*)<sup>1-2</sup>.

### 3. *Aegeria pallene* Druce.

*Aegeria pallene* Druce Ann-Mag. NH. (6 s.) 4 80-1 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 321 sp. 2<sup>a</sup> Pf. 69·8 (1896-7)<sup>2</sup>.

Type ♂ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: TABASCO<sup>1-2</sup>: Teapa, III-IV. 1888 (*H. H. Smith*)<sup>1-2</sup>.

### 4. *Aegeria sellustiformis* Druce.

=†*sallustiformis* Druce.

*Aegeria sellustiformis* Druce Biol. C-Am. Ins. Lp-Het. 1 30 sp. 3 (XI. 1883)<sup>1</sup>. *Aegeria sallustiformis* Druce Biol. C-Am. Ins. Lp-Het. 1 Pf. 5·2 (XI. 1883)<sup>1</sup>. *Aegeria sellustiformis* Druce Biol. C-Am. Ins. Lp-Het. 2 321 (1896)<sup>2</sup>.

Type ♂ (*Bugaba*; *Godm-Salv. Coll.*) BM.

Hab. Central America—MEXICO<sup>2</sup>: VERA CRUZ<sup>2</sup>: Coatepec (*Brooks*)<sup>2</sup>—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Bugaba, 800-1500 ft. (*G. C. Champion*)<sup>1</sup>; Volcan de Chiriqui (*Trötsch*)<sup>2</sup>.

The Type from Bugaba has HW: 3-4 stalked; these veins are connate in the specimen from Coatepec.

5. **Aegeria ruficaudis** Wkr.

*Aegeria ruficaudis* Wkr. Cat. Lp. BM. 31 6-7 (1864)<sup>1</sup>. *Sesia ruficaudis* Bdv. HN. Ins. Lp-Het. 1 451 sp. 42 (1874)<sup>2</sup>. *Aegeria ruficaudis* Druce Biol. C-Am. Ins. Lp-Het. 1 30 sp. 4 Pf. 5·6 (1883)<sup>3</sup>.

Type ♂ (1858: 6) BM.

Hab. AMERICA, C-S. Central America<sup>3</sup>—PANAMA<sup>3</sup>: CHIRIQUI<sup>3</sup>: San Feliz (*G. C. Champion*)<sup>3</sup>. South America<sup>1-3</sup>—BRAZIL<sup>1-3</sup>: AMAZONS<sup>1-3</sup>: Ega (*H. W. Bates*)<sup>1-3</sup>.

6. **Aegeria hippolyte** Druce.

*Aegeria hippolyte* Druce Ann-Mag. NH. (6 s.) 4 80 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 322 sp. 4<sup>a</sup> Pf. 69·9 (1896-7)<sup>2</sup>.

Type ♀ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: MORELOS<sup>1-2</sup>: Cuernavaca, VI. 1888 (*H. H. Smith*)<sup>1-2</sup>.

7. **Aegeria deipyla** Druce.

*Aegeria deipyla* Druce Biol. C-Am. Ins. Lp-Het. 1 30 sp. 5 Pf. 5·8 (1883)<sup>1</sup>: 2 322 (1896)<sup>2</sup>.

Type ♂ (*Bugaba; Godm-Salv. Coll.*) BM.

Hab. Central America—MEXICO<sup>2</sup>: VERA CRUZ<sup>2</sup>: Atoyac (*H. H. Smith*)<sup>2</sup>—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Bugaba, 800-1500 ft. (*G. C. Champion*)<sup>1</sup>.

8. **Aegeria producta** Wkr.

*Aegeria producta* Wkr. Cat. Lp. BM. 31 4 (1864)<sup>1</sup>. *Sesia producta* Bdv. HN. Ins. Lp-Het. 1 449 sp. 38 (1874)<sup>2</sup>. *Aegeria producta* Druce Biol. C-Am. Ins. Lp-Het. 1 30 sp. 6 Pf. 5·7 (1883)<sup>3</sup>: 2 322 (1896)<sup>4</sup>.

Type ♂ (1858: 135, *Oaxaca*) BM.

Hab. Central America—MEXICO<sup>1-4</sup>: GUERRERO<sup>4</sup>: Rincon, 2800 ft. (*H. H. Smith*)<sup>4</sup>: OAXACA<sup>1-3</sup>: Oaxaca (*Sallé*)<sup>1-3</sup>—PANAMA<sup>3</sup>: CHIRIQUI<sup>3</sup>: Bugaba, 800-1500 ft. (*G. C. Champion*)<sup>3</sup>.

9. **Aegeria halmyris** Druce.

*Aegeria halmyris* Druce Ann-Mag. NH. (6 s.) 4 79 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 322 sp. 6<sup>a</sup> Pf. 69·13 (1896-7)<sup>2</sup>.

Type ♂ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: GUERRERO<sup>1-2</sup>: Rincon, 2800 ft., IX. 1888 (*H. H. Smith*)<sup>1-2</sup>.

10. **Aegeria hipsides** Druce.

*Aegeria hipsides* Druce Ann-Mag. NH. (6 s.) 4 80 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 322 sp. 6<sup>b</sup> Pf. 69·14 (1896-7)<sup>2</sup>.

Type ♂ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: GUERRERO<sup>1-2</sup>: Amula, 6000 ft., VIII. 1888 (*H. H. Smith*)<sup>1-2</sup>.

11. **Aegeria hela** Druce.

*Aegeria hela* Druce Ann-Mag. NH. (6 s.) 4 79 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 322 sp. 6<sup>o</sup> Pf. 69 · 15 (1896-7)<sup>2</sup>.

Type ♀ (*Atoyac*; *Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: VERA CRUZ<sup>1-2</sup>: Atoyac, IV. 1888 (*H. H. Smith*)<sup>1-2</sup>: TABASCO<sup>1-2</sup>: Teapa, I. 1888 (*H. H. Smith*)<sup>1-2</sup>.

12. **Aegeria laeta** Wkr.

*Aegeria laeta* Wkr. Cat. Lp. BM. 8 59 sp. 107 (1856)<sup>1</sup>. *Sesia laeta* Bdv. HN. Ins. Lp-Het. 1 459-60 sp. 62 (1874)<sup>2</sup>. *Aegeria laeta* Druce Biol. C-Am. Ins. Lp-Het. 1 30 sp. 7 Pf. 5 · 10 (1883)<sup>3</sup>.

Type ♂ BM.

Hab. [loc.?<sup>1-2</sup>] Central America<sup>3</sup>—GUATEMALA<sup>3</sup>: BAJA VERA PAZ<sup>3</sup>: San Gerónimo (*G. C. Champion*)<sup>3</sup>.

13. **Aegeria helena** Druce.

*Aegeria helena* Druce Ann-Mag. NH. (6 s.) 4 80 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 323 sp. 7<sup>a</sup> Pf. 69 · 10 (1897)<sup>2</sup>.

Type ♀ (*Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: GUERRERO<sup>1-2</sup>: Amula, 6000 ft., VIII. 1888 (*H. H. Smith*)<sup>1-2</sup>.

14. **Aegeria hermione** Druce.

*Aegeria hermione* Druce Ann-Mag. NH. (6 s.) 4 79 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 323 sp. 7<sup>o</sup> Pf. 69 · 12 (1896-7)<sup>2</sup>.

Type ♀ (*Teapa*; *Godm-Salv. Coll.*) BM.

Hab. MEXICO<sup>1-2</sup>: VERA CRUZ<sup>1-2</sup>: Atoyac, V. 1888 (*H. H. Smith*)<sup>1-2</sup>: TABASCO<sup>1-2</sup>: Teapa, II. 1888 (*H. H. Smith*)<sup>1-2</sup>.

15. **Aegeria aurata** H.Edw.

*Aegeria aurata* H.Edw. Pap. 1 190 (1881)<sup>1</sup>; Druce Biol. C.-Am. Ins. Lp-Het. 1 31 sp. 8 (1883)<sup>2</sup>.

Type ♂ (*H. Edwards Coll.*).

Hab. PANAMA (*H. Edwards*)<sup>1-2</sup>.

16. **Aegeria flava** H.Edw.

*Aegeria flava* H.Edw. Pap. 1 189 (1881)<sup>1</sup>; Druce Biol. C-Am. Ins. Lp-Het. 1 31 sp. 9 (1883)<sup>2</sup>.

Type ♀ (*H. Edwards Coll.*).

Hab. PANAMA<sup>1-2</sup>: PANAMA<sup>1-2</sup>: Colon (*Mead*)<sup>1-2</sup>.

17. **Aegeria guatemalena** Druce.

*Aegeria guatemalena* Druce Biol. C-Am. Ins. Lp-Het. 1 31 sp. 10 Pf. 5 · 9 (1883)<sup>1</sup>: 2 323 (1896)<sup>2</sup>.

Type ♀ (*San Gerónimo*; *Godm-Salv. Coll.*) BM.

*Hab.* Central America<sup>1-2</sup>—MEXICO<sup>2</sup>: VERA CRUZ<sup>2</sup>: Jalapa (*W. Schaus*)<sup>2</sup>—GUATEMALA<sup>1</sup>: BAJA VERA PAZ<sup>1</sup>: San Gerónimo (*G. C. Champion*)<sup>1</sup>.

### 18. *Aegeria ovinia* Druce.

*Aegeria ovinia* Druce Biol. C-Am. Ins. Lp-Het. 2 324 sp. 16 Pf. 68·9 (1896)<sup>1</sup>.

*Type* ♂ (*Schaus Coll.*) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Coatepec (*W. Schaus*)<sup>1</sup>.

### 19. *Aegeria geliformis* Wkr.

*Aegeria* (*Conopia*) *geliformis* Wkr. Cat. Lp. BM. 8 46 sp. 79 (1856)<sup>1</sup>. *Trochilium* (*Conopia*) *geliformis* Morris Syn. Lp. N-Am. 333-4 sp. 20 (1862)<sup>2</sup>. *Aegeria geliformis* Grt. & Rbnsn. List Lp. N-Am. p. VI (1868)<sup>3</sup>. *Sesia geliformis* Bdv. HN. Ins. Lp-Het. 1 441 sp. 17 (1874)<sup>4</sup>. *Aegeria geliformis* H.Edw. Pap. 1 208 Pf. 4·7-7<sup>a</sup> (1881)<sup>5</sup>. *Pyrrhotaenia geliformis* Grt. New Check List N-Am. Moths 12 sp. 101 (1882)<sup>6</sup>. *Aegeria geliformis* Druce Biol. C-Am. Ins. Lp-Het. 1 32 sp. 14 Pf. 5·12 ♂, 17 ♀ (1883)<sup>7</sup>. *Pyrrhotaenia geliformis* H.Edw. Pap. 3 157 (1884)<sup>8</sup>. *Sciapteron geliformis* Hmsn. Ann-Mag. NH. (6 s.) 16 349 (1895)<sup>9</sup>. *Pyrrhotaenia geliformis* Btmlr. Bull. Am. Mus. NH. 8 145 (1896)<sup>10</sup>. *Sesia geliformis* Btmlr. Mem. Am. Mus. NH. 1 309 Pf. 32·4 ♀ (1901)<sup>11</sup>; Dyar Bull. US. Nat. Mus. 52 370 sp. 4247 (1902)<sup>12</sup>.

*Type* ♂ (1846: 10, *United States*) BM.

*Hab.* AMERICA, N-C-I. United States<sup>1-8, 10-12</sup>—FLORIDA<sup>8, 10-12</sup>: ARCHER CO.<sup>8</sup>. Central America<sup>7, 10-11</sup>—MEXICO<sup>7, 10-11</sup>: VERA CRUZ<sup>7</sup>: Jalapa (*Höge*)<sup>7</sup>. West Indies<sup>9, 11-12</sup>—WINDWARD I<sup>8, 9, 11-12</sup>: ST VINCENT<sup>9, 11</sup>.

[2. AEGERIA F.: Palpi hairy.]

### 20. *Aegeria animosa* H.Edw.

*Pyrrhotaenia animosa* H.Edw. Pap. 3 156 (1884)<sup>1</sup>: Ent. Am. 3 224 (1888)<sup>2</sup>; Btmlr. Bull. Am. Mus. NH. 4 175 (1892)<sup>3</sup>: 8 146 (1896)<sup>4</sup>. *Aegeria animosa* Druce Biol. C-Am. Ins. Lp-Het. 2 324 sp. 15 (1896)<sup>5</sup>; Btmlr. Mem. Am. Mus. NH. 1 310 Pf. 31·29 ♂-30 ♀ (1901)<sup>6</sup>; Dyar Bull. US. Nat. Mus. 52 370 sp. 4249 (1902)<sup>7</sup>.

*Type* ♂ ♀ (*Neumoegen Coll.*) Mus. Brooklyn Inst. Arts and Sc.<sup>6</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-7</sup>—ARIZONA<sup>1-7</sup>. Central America<sup>5</sup>—MEXICO<sup>5</sup>: N. SONORA (*H. K. Morrison*)<sup>5</sup>.

### 21. *Aegeria ceres* Druce.

*Aegeria ceres* Druce Biol. C-Am. Ins. Lp-Het. 1 31 sp. 12 Pf. 5·11 (1883)<sup>1</sup>.

*Type* ♂ (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA<sup>1</sup>: TOTONICAPAM<sup>1</sup>: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*)<sup>1</sup>.



22. **Aegeria verrugo** Druce.

*Sinnina verrugo* Druce Biol. C-Am. Ins. Lp-Het. 1 Pf. 5·21 (XI. 1883)<sup>1</sup>. *Sannina verrugo*  
Druce Biol. C-Am. Ins. Lp-Het. 1 34 sp. 1 (VI. 1884)<sup>2</sup>.

Type ♀ (Godm-Salv. Coll.) BM.

Hab. Central America<sup>1-2</sup>—MEXICO<sup>2</sup>: PUEBLA<sup>2</sup>: Esperanza (Höge)<sup>2</sup>.

23. **Aegeria armasata** Druce.

*Aegeria armasata* Druce Ann-Mag. NH. (6 s.) 9 275 (1892)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 323  
sp. 7<sup>b</sup> Pf. 69·11 (1897)<sup>2</sup>.

Type ♂ (Godm-Salv. Coll.) BM.

Hab. MEXICO<sup>1-2</sup>: DURANGO<sup>1-2</sup>: Durango City (Becker)<sup>1-2</sup>.

24. **Aegeria phyllis** Druce.

*Syncara phyllis* Druce Biol. C-Am. Ins. Lp-Het. 1 Pf. 5·18 (XI. 1883)<sup>1</sup>. *Sincara phyllis* Druce  
Biol. C-Am. Ins. Lp-Het. 1 33 sp. 1 (VI. 1884)<sup>2</sup>.

Type ♀ (Godm-Salv. Coll.) BM.

Hab. GUATEMALA<sup>2</sup>: QUEZALTENANGO<sup>2</sup>: Cerro Zunil, VIII-IX. 1880 (G. C. Champion)<sup>2</sup>.

25. **Aegeria maeonia** Druce.

*Sincara maeonia* Druce Ann-Mag. NH. (6 s.) 4 81-2 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 325  
sp. 5 Pf. 69·20 (1896-7)<sup>2</sup>.

Type ♂ (Godm-Salv. Coll.) BM.

Hab. MEXICO<sup>1-2</sup>: GUERRERO<sup>1-2</sup>: Omilteme, 8000 ft., VIII. 1888 (H. H. Smith)<sup>1-2</sup>.

26. **Aegeria manilia** Druce.

*Sincara manilia* Druce Ann-Mag. NH. (6 s.) 4 82 (1889)<sup>1</sup>: Biol. C-Am. Ins. Lp-Het. 2 325  
sp. 4 Pf. 69·19 (1896-7)<sup>2</sup>.

Type ♂ (S. de las Aguas Escondidas; Godm-Salv. Coll.) BM.

Hab. MEXICO<sup>1-2</sup>: GUERRERO<sup>1-2</sup>: Sierra de las Aguas Escondidas, 7000 ft., VII.  
1888 (H. H. Smith)<sup>1-2</sup>; Omilteme, 8000 ft., VIII. 1888 (H. H. Smith)<sup>1-2</sup>.

27. **Aegeria cambyses** Druce.

*Syncara cambyses* Druce Biol. C-Am. Ins. Lp-Het. 1 Pf. 5·19 (XI. 1883)<sup>1</sup>. *Sincara cambyses*  
Druce Biol. C-Am. Ins. Lp-Het. 1 33 sp. 2 (VI. 1884)<sup>2</sup>.

Type ♀ (Godm-Salv. Coll.) BM.

Hab. PANAMA<sup>2</sup>: CHIRIQUI<sup>2</sup>: Bugaba (G. C. Champion)<sup>2</sup>.

28. **Aegeria lytaea** Druce.

*Syncara lytaea* Druce Biol. C-Am. Ins. Lp-Het. 1 Pf. 5·20 (XI. 1883)<sup>1</sup>. *Sincara lytaea* Druce  
Biol. C-Am. Ins. Lp-Het. 1 33 sp. 3 (VI. 1884)<sup>2</sup>: 2 325 (1896)<sup>3</sup>.

Type ♀ (Zapote; Godm-Salv. Coll.) BM.

*Hab. Central America*<sup>1-3</sup>—GUATEMALA<sup>2</sup>: ESCUINTLA<sup>2</sup>: Zapote, V-VI. 1879 (*G. C. Champion*)<sup>2</sup>—[MEXICO<sup>3</sup>: VERA CRUZ<sup>3</sup>: Atoyac (*H. H. Smith*)<sup>3</sup>: TABASCO<sup>3</sup>: Teapa (*H. H. Smith*)<sup>3</sup>.—These Mexican specimens differ from the type in their smooth palpi and must be placed in the group *Synanthedon*.]

[*Nacoleia hades* Druce. *Aegeria hades* Druce Ann-Mag. NH. (6 s.) 4 78-9 (1889)<sup>1</sup>. *Aegeria ? hades* Druce Biol. C-Am. Ins. Lp-Het. 2 323 sp. 13<sup>a</sup> Pf. 69·16 (1897)<sup>2</sup>.

Type o (*Godm-Salv. Coll.*) BM.

*Hab. MEXICO*<sup>1-2</sup>: TABASCO<sup>1-2</sup>: Teapa, II. 1888 (*H. H. Smith*)<sup>1-2</sup>.

Sir George Hampson refers this species to the genus *Nacoleia* Wkr. (*Pyralidae: Pyraustinae*) and places it next to *pudens* Druce.—Drnt.]

### PARANTHRENE Hb.

= *MEMYTHRUS* Nwmn.; = *SCIAPTERON* Stgr.; = *TARSA* Wkr.; = *PSEUDOSIESIA* Fldr.; = *TIRISTA* Wkr.; = *PRAMILA* Moore; = *ALBUNA* H.Edw.; = *FATUA* H.Edw.; = *\*SPHECIA* (*nec* Hb.) Druce; = *\*BEMBEZIA* (*nec* Hb.) Druce.

Type 1: *Sphinx tabaniformis* Rtmbg. (= *asiliiformis*, Hb.; = *\*vespiformis* Nwmn.; Nwmn. 1832).

PARANTHRENE Hb. Verz. Schm. 128 sp. 1370-3 (1820). *MEMYTHRUS* Nwmn. 'Sphinx vespiformis' 53-4 (1832). PARANTHRENE Nwmn. Ent. Mag. 1 73, 83-4 no. 6 sp. 1 (1832); Stph. Ill. Br. Ent. Haust. 4 405 sp. 1371 (1835); Wstwd. Syn. Gn. Br. Ins. 89 (1840). *SCIAPTERON* Stgr. Ses. Berol. 39, 43-4 Pf. 1·2, 13-14, 20, 22, 33, 42, 45 - 2·55, 59, 65 (1854); Stett. Ent. Ztg. 17 145, 195-9 no. 2 sp. 4-8 (1856); Stgr-Wk. Cat. Lp. Eur. 38-9 no. 52 sp. 501-5 (1871); Hmsn. Fn. Br-Ind. Moths 1 187, 191-4 no. 5 sp. 352-61 tf. 192·121 (1892); Stgr-Rbl. Cat. Lp. Pal. 1 400 no. 748 sp. 4538-44 (1901). *\*SPHECIA* Druce Biol. C-Am. Ins. Lp-Het. 1 29 sp. 1 Pf. 5·4-5 (1883); 2 321 (1896). *\*BEMBEZIA* Druce Biol. C-Am. Ins. Lp-Het. 2 324 sp. 1 (1896). *MEMYTHRUS* Btmlr. Mem. Am. Mus. NH. 1 223, 225, 245-54, tf. 246·14 Pl. 29-31, 33 (1901); Dyar Bull. US. Nat. Mus. 52 365-6 sp. 4175-86 (1902); Busck Pr. Ent. Soc. Wash. 11 117, 118 no. 15 (1909). *SCIAPTERON* Splr. Schm. Eur. 2 307-8 no. 4 sp. 1 Pf. 20·15 (1910). PARANTHRENE Brtl., Seitz Grossschm. Pal. 2 379-81 Pf. 50·k, 51·b (1912).

In his essay 'Sphinx vespiformis' (1832) Newman proposed a new genus *Memythrus* for *tabaniformis* Rtmbg. (= *\*vespiformis* Nwmn., *nec* L.), but in September of the same year (Ent. Mag. 1 73, 83-4) he sunk *Memythrus* as a synonym of *Paranthrene* Hb., which he redescribed taking for its Type the same species *tabaniformis* Rtmbg. (= *\*vespiformis* Nwmn.)—*Memythrus* Nwmn. and *Paranthrene* Hb. are therefore synonyms. Herrich-Schäffer (1846) and Zeller (Isis 1847 418) redescribed *Paranthrene* Hb., citing *tineiformis* Hb. as its type; Newman's previous restriction must, however, be accepted and *\*Paranthrene* (Hb.) Stgr-Rbl., etc. (*nec* Hb.+ Nwmn.) will sink as a synonym of *Tinthia* Wkr. (= *Zenodoxus* Grt. & Rbnsn.).

Type 2: *Tarsa bombyciformis* Wkr. (Wkr. 1856).

TARSA Wkr. Cat. Lp. BM. 8 8, 61 no. 4 sp. 1 (1856).

Type 3: *Pseudosesia insularis* Fldr. (Fldr. 1861).

PSEUDOSESIA Fldr. SB. Kais. Ak. Wiss. Wien (Math-NW.) 43 28 sp. 59 (1861).

Type 4: *Tirista argentifrons* Wkr. (Wkr. 1864).

TIRISTA Wkr. Cat. Lep. BM. 31 22-3 (1864); Druce Biol. C-Am. Ins. Lp-Het. 1 32-3 sp. 1 Pf. 5·14 (1883-4): 2 325 sp. 2 Pf. 68·7 (1896).

Type 5: *Pramila atkinsoni* Moore (Moore 1879).

PRAMILA Moore Descr. Ind. Lp. Coll. Atk. 9 Pf. 2·1 (1879).

Type 6: *Aegeria pyramidalis* Wkr. (= *hyloformis* Wkr.; H.Edw. 1881).

ALBUNA H.Edw. Pap. 1 186-9 (1881); Btmlr. Mem. Am. Mus. NH. 1 223, 225, 272-5 tf. 21 Pf. 30·12, 32·34, 33·12, 19 (1901); Dyar Bull. US. Nat. Mus. 52 367 sp. 4197-8 (1902); Busck Pr. Ent. Soc. Wash. 11 117, 118 no. 15 (1909).

Type 7: *Sesia asilipennis* Bdv. (= *denudatum* Harris; H.Edw. 1882).

FATUA H.Edw. Pap. 2 97-8 (1882).

### 1 *Paranthrene championi* Druce.

*Sphecia championi* Druce Biol. C-Am. Ins. Lp-Het. 1 29 sp. 1 Pf. 5·4 ♂ - ·5 ♀ (1883)<sup>1</sup>: 2 321 (1896)<sup>2</sup>.

Type ♂ ♀ (*Guatemala*; *Godm-Salv. Coll.*) BM.

*Hab.* Central America—MEXICO<sup>2</sup>: VERA CRUZ<sup>2</sup>: Coatepec (*W. Schaus*)<sup>2</sup>—GUATEMALA<sup>1</sup>: GUATEMALA: Guatemala City (*G. C. Champion*)<sup>1</sup>.

### 2. *Paranthrene argentifrons* Wkr.

*Tirista argentifrons* Wkr. Cat. Lp. BM. 31 22-3 (1864)<sup>1</sup>; Druce Biol. C-Am. Ins. Lp-Het. 1 33 Pf. 5·14 (1883-4)<sup>2</sup>.

Type ♂ (1858:135) BM.

*Hab.* MEXICO<sup>1-2</sup>: OAXACA<sup>1-2</sup>: Oaxaca (*Sallé*)<sup>1-2</sup>.

### 3. *Paranthrene praxila* Druce.

*Tirista praxila* Druce Biol. C-Am. Ins. Lp-Het. 2 325 sp. 2 Pf. 68·7 (1896)<sup>1</sup>.

Type ♂ (*W. Schaus Coll.*) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Jalapa (*W. Schaus*)<sup>1</sup>.

### 4. *Paranthrene? eucheripennis* Bdv.

*Bembecia eucheripennis* Bdv. HN. Ins. Lp-Het. 1 384 sp. 2 (1874)<sup>1</sup>. *Bembecia? eucheripennis* Druce Biol. C-Am. Ins. Lp-Het. 1 324 sp. 1 (1896)<sup>2</sup>.

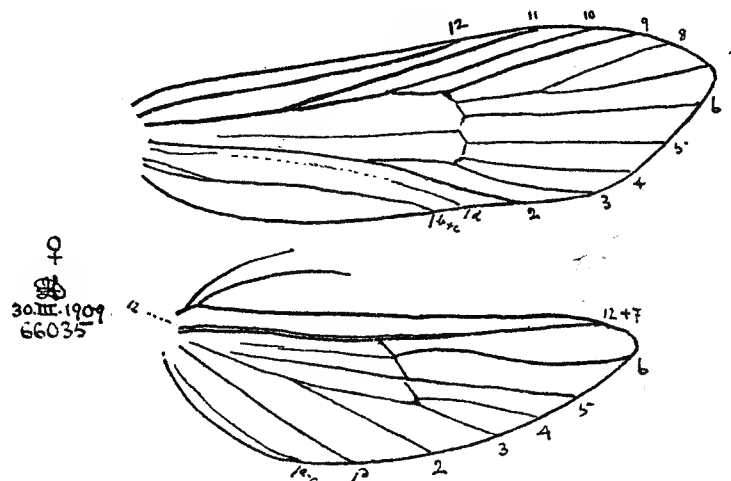
*Hab.* MEXICO<sup>1-2</sup>.

### TINAEGERIA Wkr.

Type: *Tinaegeria ochracea* Wkr. (Wlsm. 1889).

TINAEGERIA Wkr. Cat. Lp. BM. 8 260-1 sp. 1-3 (1856); 31 25 (1864); Btlr. Tr. Ent. Soc. Lond.

1878 123-4 Pf. 5·13, 15 (1878); Wlsm. Tr. Ent. Soc. Lond. 1889 1-9, 10-13, 36 Pf. 1·1-7, 6·1-2 (1889); Meyr. Pr. Lin. Soc. NSW. 32 132 (1907); Tr. Ent. Soc. Lond. 1909 18 (1909).



J. H. Durrant, del.

29. *Tinaeigeria fasciata* Wkr. ♀.

*Antennae* ♀ thickly clothed with long scales to half their length, thence simple. *Labial Palpi* recurved, ascending, very long and slender; median and terminal joints about equal in length. *Maxillary Palpi* small, drooping. *Haustellum* long, scaled at base. *Ocelli* present. *Head* and *Thorax* smooth. *Forewings* elongate, the margins nearly parallel, rounded at apex; wing-surface without nude space: *neuration* 12 veins; 7-8 stalked, 7 to costa; rest separate; 1 furcate at base, but 1<sup>b</sup> and 1<sup>c</sup> approximating preparatory to coincidence. *Hindwings* partially transparent, widened in the middle, tapering toward the base and apex, costa somewhat depressed beyond the middle, apex rounded, dorsum evenly rounded: *neuration* 8 veins; subcosta and radius geminate, becoming coincident outwardly; 3-4 separate, but closely approximate [truncate in *fasciata* Wkr., more remote in *ochracea* Wkr.]; discoidal obliquely receding; 6 sinuate, remote from 7 at origin, thence bent upward and then receding; 5 and 6 continued through cell as upper and lower media; below 4 and lower media the wing-membrane is nude, with the exception of the dorsum where scale-attachment punctures are visible as on the rest of the wing. *Abdomen* brightly coloured, not fringed at the edges. *Legs*: hind tibiae with long spurs, not tufted.

The description and figure of the *neuration* of *Tinaeigeria ochracea* Wkr., published in 1889, contained some inaccuracies which are corrected above. It is now apparent that *Arauzona* Wkr. and *Tinaeigeria* Wkr. are earlier forms from which the more specialised *Aegeriadae* can be derived, and there is no justification for the retention of the family *Tinaegeriidae* Hmsn. [Fn. Br. Ind. Moths 1 12, 206-8 tf. 134-5 (1892)] to include *Tinaeigeria* Wkr., *Snellenia* Wlsm., *Eretmocera* Z., etc.

### 1. *Tinaeigeria fasciata* Wkr.

*Tinaeigeria fasciata* Wkr. Cat. Lp. BM. 8 261 sp. 3 (1856)<sup>1</sup>; Wlsm. Tr. Ent. Soc. Lond. 1889 13, 36 Pf. 6·1 (1889)<sup>2</sup>.

*Type* ♂ (1850:4) BM.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881-3 (G. C. Champion). South America<sup>1-2</sup>—BRAZIL<sup>1-2</sup>: PARA<sup>1-2</sup>: Pará (H. W. Bates)<sup>1-2</sup>.

## ARAUZONA Wkr.

Type : *Arauzona basalis* Wkr. (Wkr. 1864).

ARAUZONA Wkr. Cat. Lp. BM. 31 25-6 (1864) ; Btlr. Tr. Ent. Soc. Lond. 1878 122-4 Pf. 5·9 (1878) ; Wlsm. Tr. Ent. Soc. Lond. 1889 2-3, 8-9, 10-11, 13, 36 Pf. 6·2 (1889).

This genus, which was wrongly sunk as synonymous with *Tinaegeria* Wkr. (Wlsm. Tr. Ent. Soc. Lond. 1889 8-9, 10-11), may be recognised by the neuration—FW: 12 veins, all separate, 7 to apex—in *Tinaegeria* FW: 7-8 are stalked.

1. *Arauzona basalis* Wkr.

*Arauzona basalis* Wkr. Cat. Lp. BM. 31 26 (1864)<sup>1</sup>. *Tinaegeria basalis* Wlsm. Tr. Ent. Soc. Lond. 1889 8-9, 11, 13, 36 Pl. 6·2 (1889)<sup>2</sup>.

Type ♀ (1858:6) BM.

*Hab.* AMERICA, C-S. Central America — PANAMA : CHIRIQUI : Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). South America<sup>1-2</sup>—BRAZIL<sup>1-2</sup> : AMAZONS<sup>1-2</sup> : Ega (*H. W. Bates*)<sup>1-2</sup>.

## Fam. 8. COSSIDAE.

[*Vide* Druce Biol. C-Am. 1 230-1 Pl. 24 (1887) : 2 448-9 Pl. 88 (1898) ; Dgn. Ann. Soc. Ent. Belg. 48 122 (1904)].

## Fam. 9. ARRHENOPHANIDAE, fam. n.

*Antennae* biflabellate, bilamellate, or bipectinate throughout in both sexes (pectinations more strongly developed in ♀ than in ♂). *Palpi* upturned, terminal joint not acute. *Head* and *Thorax* roughly clothed. *Forewings*: 7 separate, 9 stalked with 8, 10 absent (or 9 stalked with 10, 8 separate, *Cnissostages* Z.); 1<sup>bc</sup> basally furcate, 1<sup>d</sup> obsolescent. *Hindwings*: 6-7 remote, discoidal not connected by cross-vein to 12; 1<sup>a-d</sup> present.

Most nearly allied to *Cossidae* (*Cossus* F.) in the structure of the antennae, but in the forewings the areole is absent and 7 separate, and in the hindwings 6 is remote from 7; among the *Tineidae* the relationship would appear to be with *Narycia* Stph. and *Alavona* Wkr., rather than with *Acrolophus* Poey.

## ARRHENOPHANES, gen. n.

(ἀρρενοφάνης = masculine-looking.)

Type : *Phalaena Bombyx perspicilla* Stoll. (Tab. VII. fig. 1.)

=\**PARATHYRIS* (p.) Hb. Verz. Schm. 157-8 sp. 1641-3 (1820) ; [*nec* Wkr. Cat. Lp. BM. 5 1087-91 no. 69 sp. 1-8 (1855)] ; Kby. Syn. Cat. Lp-Het. 1 852-3 no. 146 sp. 1-13 (1892) ; Busck, Smithson. Misc. Coll. 59 (4) 8-10 Pl. 1 (1912).



*Antennae*  $-\frac{2}{3}$ ; basal joint without pecten; ♂ bipectinate, each pectination biciliate; ♀ strongly biflabellate. *Labial Palpi* upturned, not reaching base of antennae, thickened with scales; terminal joint shorter than median, obtuse. *Maxillary Palpi* and *Haustellum* rudimentary. *Ocelli* absent. *Head* and *Thorax* rough, the latter with posterior tuft. *Forewings* widening outwardly from the base, costa slightly convex, apex obtusely rounded, termen oblique, not sinuate: *neuration* 11 veins (10 absent); 8-9 stalked, 8 to termen; 7 separate; 3-5 somewhat approximate, from end of cell, 4 nearer to 5 than to 3; 2 from beyond outer third of cell; an internal vein to between 5 and 6, no secondary cell; 1 basally furcate. *Hindwings* 1<sup>+</sup>, apex obtuse, termen and dorsum evenly convex, cubitus not pectinate: *neuration* 8 veins, all separate; 4-6 parallel, 6 nearer to 5 than to 7, an internal vein to between 5 and 6; 1<sup>d</sup> present, 1<sup>bc</sup> basally furcate. *Abdomen* robust, hairy. *Legs*: front tibiae with epiphysis almost as long as the tibia; hind tibiae hairy, spurs well-developed.

A genus of very robust and Bombyciform appearance, specially remarkable from the much greater development of the antennae in the ♀ than in the ♂, but, as the pectinations are biciliate in the ♂ only, the greater development of these pectinations in the ♀ is probably merely structural and not functional; Busck records the larvae as living in *Polyporus* and making cases.

The most nearly allied genus is *Cnissostages* Z. (*oleagina* Z.), which however differs in having FW: 12 veins, 9-10 stalked, and a furcate internal vein in both wings.

[*PARATHYRIS* Hb. ("*Pharathyrides*") was founded to include three species: 1641 *perspicilla* Stoll, 1642 *cedonulli* (Crmr.) Stoll, and 1643 *pandiona* (Crmr.) Stoll. Walker recharacterised the genus in 1855, including additional species, but omitting *perspicilla* Stoll, which he referred [Cat. Lp-Het. BM. 7 1740 (1856)] with a "?" to *Dasychira* Stph. Kirby included thirteen species in *Parathyris* Hb., marking *cedonulli* Stoll with a \* as the Type of the genus; he replaced *perspicilla* Stoll in the genus, but with a "?", as sp. 13. Hampson [Cat. Lp-Phal. BM. 3 9 tf. 1 sp. 1194 (1901)], regarding the first species (*perspicilla* Stoll) as the Type of *Parathyris* Hb., disregards Kirby's specification and describes *Thyrarctia* Hmsn. for the reception of *cedonulli* Stoll. *Parathyris* Hb., Kby., and *Thyrarctia* Hmsn. are synonyms with the common Type *cedonulli* Stoll, and a new genus (*Arrhenophanes*) is required for *perspicilla* Stoll.]

### 1. *Arrhenophanes perspicilla* Stoll. (Tab. VII. fig. 1.)

*Phalaena Bombyx perspicilla* Stoll, Sppl. Crmr. Pap. Exot. 74 Pf. 16·3 (1790)<sup>1</sup>. *Parathyris perspicilla* Hb. Verz. Schm. 158 sp. 1641 (1820)<sup>2</sup>. *Dasychira? perspicilla* Wkr. Cat. Lp. BM. 7 1740 (1856)<sup>3</sup>. *Parathyris? perspicilla* Kby. Syn. Cat. Lp-Het. 1 853 sp. 13 (1892)<sup>4</sup>. *Parathyris perspicilla* Busck, Smithson. Misc. Coll. 59 (4) 8-10 Pl. 1 (1912)<sup>5</sup>.

*Type* ♀ (*Surinam*) Mus. — ?

*Hab.* AMERICA, C-S. Central America<sup>5</sup>—PANAMA<sup>5</sup>: CANAL ZONE<sup>5</sup>: Alajuela, Paraiso, ⊕ in *Polyporus* sp., ex. I. 1912 (*A. Busck, C. P. Crafts*)<sup>5</sup>; Tabernilla, VI. 1907 (*A. Busck*). South America<sup>1-4</sup>—SURINAM (*Renaud*)<sup>1-4</sup>—FRENCH GUIANA: St. Jean, Rio Maroni, III. 1904, VII. 1904 (*W. Schaus*), VIII. (*E. Le Moult*); St. Laurent, Rio Maroni, VIII, 16-30.XI.1906 (*E. Le Moult*); Nouveau Chantier, VII. (*E. Le Moult*)—BRAZIL: PARA: Para, ⊕ *Polyporus* sp., ex. VII. 1901 (*Dr. E. von Göldi*).

## 2. *Arrhenophanes volcanica*, sp. n. (Tab. VII. fig. 2.)

*Antennae* ♂ strongly serrate and minutely ciliate, but not bipectinate; ♀ bipectinate 5-6, with closely-packed broad pectinations; ochreous. *Palpi* short, rough, slightly recurved, terminal joint shorter than median; whitish ochreous, smeared with brownish fuscous above. *Head* rough; ochreous. *Thorax* covered with long upstanding spatulate hair-scales; whitish ochreous, tipped with dark brown posteriorly. *Forewings* with the costa raised near the base, and again near the middle, apex depressed, rounded, termen somewhat oblique, slightly concave, very broad; whitish ochreous, with a golden silky gloss, especially on the apical portion of the cell, semitransparent from a little before the middle to its outer extremity, presenting in different lights the appearance of a large patch of shining pale straw-yellow, or pale greenish grey, with iridescent lustre; this patch is terminated by a dark umber-brown line which separates it from a broad band of rich golden buff-brownish, in varying shades, having the lustre of silk plush; the band passes round the outer extremity of the transparent patch, and becoming wider below, follows its lower margin to the middle, where it is separated by a wedge-shaped streak of bright iridescent lilac from a coarsely scaled mat of shining pinkish brown, extending to the middle of the dorsum, but fading inward into the paler, or more whitish ochreous basal third of the wing, which is entirely clothed with strong upstanding spatulate scales; a narrow dark brown line defines the outer margin of the large white ocelloid median pattern, but does not extend above vein 8; between veins 5 and 6 is a small dark brown terminal spot; cilia shining, pale golden ochreous. *Exp. al.* ♂ 34, ♀ 40 mm. *Hindwings* 1; in colour almost the exact counterpart of the forewings, with the exception that the semitransparent discal patch is less conspicuous; the plush-like golden buff markings are more diffused outward over the wing-surface, containing two brighter golden spots and traversed by four or five shorter slender transverse dark brown lines; the brown marginal spot is also present, and another appears near the flexus, while the cilia are slightly mixed with dark brown in the same direction. *Abdomen* ♀ whitish ochreous, anal tuft ochreous; ovipositor broad, rather obtuse, bent under the body: ♂ with the anal claspers long and narrow, uncus slender and slightly bent over. *Legs* whitish ochreous.

*Type* ♀ (66457, Chiriqui); ♂ (66456, Cerro Zunil) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* Central America—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000-5000 ft., VIII-IX. 1880 (G. C. Champion)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (G. C. Champion). Two specimens.

The ♂ is only about two-thirds the size of the ♀.

## Fam. 10. SPARGANOTHIDAE, fam. n.

*Type*: SPARGANOTHIS Hb. (pilleriana S-D.).

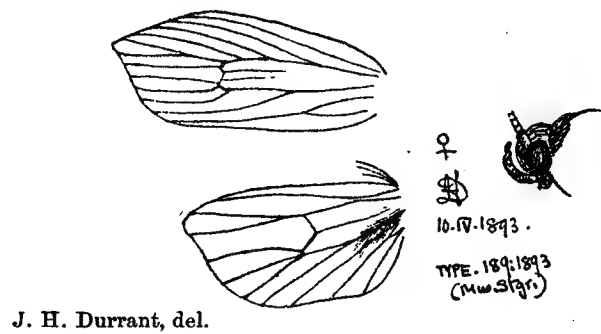
To include a series of genera having FW: 7-8 stalked (or coincident), and HW: cubitus pectinate, or impectinate.

## AESIOCOPA Z.

*Type*: Tortrix (*Aesiocopa*) *vacivana* Z. (Z. 1877).

AESIOCOPA Z. Hor. Soc. Ent. Ross. 13 106-8 (1877); Frnld. Gn. Tortr. 41, 60 (1908).

This genus agrees with *Homona* Wkr. in the structure of the palpi and in the neuration (FW: 12 veins; 7-8 stalked, 7 to termen; rest separate. HW: 8 veins; 6-7 stalked; 3-4 connate), but the cubitus of the hindwings is pectinate.

30. *Aesiocopa vacivana* Z. ♀.1. *Aesiocopa vacivana* Z. (Tab. VII. fig. 3.)*Tortrix* (*Aesiocopa*) *vacivana* Z. Hor. Soc. Ent. Ross. **13** 106-8 sp. 11 (1877) <sup>1</sup>.*Type* ♀ Mus. Stgr. (189 Wlsm. Det. 1893).*Hab.* PANAMA <sup>1</sup>: CHIRIQUI <sup>1</sup>: Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*).

Three specimens ♂ ♀ ♀ were taken at Bugaba, the ♀ ♀ agreeing with Zeller's type. The ♂ (66310) differs somewhat, but exhibits the series of white spots along the termen as in the ♀, the upper spot, preceded by a small blackish patch in the ♀, is only faintly indicated by a slightly darker spot of the ground-colour. The forewings are distinctly shorter, less produced at the apex, and of a greyer, less ochreous, colour; the diffused darker shading is also greyer brown, less ochreous, and is more limited, being broken up into small spots and mottling maintaining the same position and direction as in the ♀, but less diffused outward; there is also a short patch of brown at the base of the costa, and a row of small whitish spots along the dorsum; the narrow costal shade is somewhat broken into small spots. *Exp. al.* 33 mm. The antennae are biciliate 1. Thorax with a raised tuft posteriorly; the anterior half of the tegulae chestnut-brown.

## HOMONA Wkr.

= GODANA Wkr.; = § *ERICIA* Wkr.; = ANISOGONA Meyr.Type 1: *Tortrix coffearia* Ntnr. (= *fasciculana* Wkr.; Wkr. 1863).HOMONA Wkr. Cat. Lp. BM. **28** 424 no. 47 sp. 1 (1863); Meyr. Pr. Linn. Soc. NSW. **35** 162, 210-16 no. 24 sp. 137-46 (1910); Exot. Microlep. **1** 3-4 (1912).Type 2: *Pandemis menciana* Wkr. (= *simulana* Wkr.; Wkr. 1866).GODANA Wkr. Cat. Lp. BM. **35** 1800-1 (1866).Type 3: *Ericia aestivana* Wkr. (Meyr. 1910).§ *ERICIA* Wkr. Cat. Lp. BM. **35** 1802-3 (1866); Meyr. Pr. Linn. Soc. NSW. **35** 210 (1910).[§ Homonymous with *ERICIA* Moq-Tand. (1848) *Mollusc.*]Type 4: *Teras similana* Wkr. (Frnld. 1908).ANISOGONA Meyr. Pr. Linn. Soc. NSW. **6** 419, 464-8 no. 15 sp. 1-2 (1881); Frnld. Gn. Tortr. **43**, 60 (1908); Meyr. Pr. Linn. Soc. NSW. **35** 210 (1910).

1. *Homona patulana* Wkr.

n. syn. = *audaculana* Busck.

*Tortrix patulana* Wkr. Cat. Lp. BM. 28 325 sp. 31 (1863)<sup>1</sup>. *Cacoecia patulana* Wlsm. Ill. Typ. Lp-Het. BM. 4 6-7 Pf. 61·1 ♀ (1879)<sup>2</sup>. *Archips audaculana* Busck Jr. NY. Ent. Soc. 15 235 (1907)<sup>3</sup>.

Types: *patulana* Wkr. ♀ (1858: 135) BM.; *audaculana* Busck ♀ (10925) US. Nat. Mus. [*PT. audaculana* Busck ♀ (33400) Mus. Wlsm. BM.].

**Hab. Central America**—MEXICO<sup>1-3</sup>: VERA CRUZ<sup>3</sup>: Jalapa (*W. Schaus*<sup>3</sup>; *M. Trujillo*); Orizaba (*R. Müller*<sup>3</sup>; *W. Schaus*): OAXACA<sup>1-2</sup>: Oaxaca (*Sallé*)<sup>1-2</sup>—GUATEMALA: ALTA VERA PAZ: Rio Sinanja Valley, 8-15. X. 1879 (*G. C. Champion*): BAJA VERA PAZ: San Gerónimo, 1880 (*G. C. Champion*)—COSTA RICA: Candelaria Mts. (*C. A. Underwood*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-5000 ft., 1881-2 (*G. C. Champion*).

The ♂ (4612) of this species has the head and the basal joint of the strongly biciliate antennae bright yellow; the basal and terminal areas of the forewings are distinctly reticulated with tawny brownish on a pale yellowish ochreous ground, a large patch of tawny brownish grey extending over the outer three-fourths of the costa and overspreading the middle of the wing; the hindwings are whitish, with greyish fuscous reticulations towards the apex, and a series of black points at the base of the cilia. The ♀ varies considerably in the development of transverse fuscous reticulations, or strigulae, on the forewings.

2. *Homona sebasta*, sp. n. (Tab. VII. fig. 5.)

*Antennae* bipectinate 3; brownish. *Palpi* short, suberect; brownish ochreous. *Head* ochreous. *Thorax* brownish, mixed with ochreous. *Forewings* arched at the base; costa depressed beyond the middle, termen sinuate below the apex; pale ochreous, reticulated with brown lines at the base, and opposite to the upper half of the termen, the remainder of the wing suffused with tawny grey, appearing brownish in certain lights, the outer two-thirds of the costa hoary, the suffused portion, speckled with black scales in some specimens, extends nearly to the base on the dorsum; cilia tawny brown. *Exp. al.* 24-32 mm. *Hindwings* greyish white, sometimes profusely mottled on the apical half; with a series of fuscous spots along the base of the shining whitish cilia. *Abdomen* greyish fuscous, mixed with pale ochreous; very hairy at the base and sides. *Legs* pale cinereous.

Type ♂ (66375, *Totonicapam*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (4666) US. Nat. Mus.]

**Hab. Central America**—MEXICO: VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*)—GUATEMALA: TOTONICAPAM: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*). Four specimens.

The ♀ (4665, *Las Vigas*) is much larger than the ♂, of a uniform dark chestnut colour, minutely speckled throughout with black, a few white scales occurring on the costa before the apex; the hindwings are also darker than in the ♂, but show the same reticulations, especially on the underside; beneath the abdomen are three conspicuous black spots which are also present in the ♂.

## COELOSTATHMA Clms.

=\**AMPHISA* (*nec* Crt.) Z.

Type *Coelostathma discipunctana* Clms. (Clms. 1860).

COELOSTATHMA Clms. Pr. Ac. Nat. Sc. Phil. 12 355 (1860) ; Wkr. Cat. Lp. BM. 30 993 sp. 1 (1864). \**AMPHISA* (*nec* Crt.) Z. Verh. ZB. Ges. Wien 25:1875 Abh. 234 (1875) ; Frnld. Tr. Am. Ent. Soc. 10 22 sp. 110 (1882). COELOSTATHMA Wlsm. Pr. Z. Soc. Lond. 1897 136 no. 78 sp. 198 (1897) ; Frnld. Bull. US. Nat. Mus. 52 477 sp. 5344 (1902) ; Krft. Smith's Check List Lp. Bor-Am. 105 sp. 5761 (1903) ; Frnld. Gn. Tort. 39, 59 (1908).

1. *Coelostathma discipunctana* Clms.

*Coelostathma discopunctana* Clms. Pr. Ac. Nat-Sc. Phil. 12 355 (1860)<sup>1</sup> ; Wkr. Cat. Lp. BM. 30 993 sp. 1 (1864)<sup>2</sup>. *Tortrix discopunctana* Rbnsn. Tr. Am. Ent. Soc. 2 276-7 Pf. 6·51 (1869)<sup>3</sup>. *Tortrix* (*Amphisa* Crt.) *discopunctana* Z. Verh. ZB. Ges. Wien 25:1875 Abh. 234-5 sp. 28 (1875)<sup>4</sup>. *Tortrix discopunctana* Cmstk. US. Dp. Agr. Rp. Ent. 1880 258 (1881)<sup>5</sup>. *Amphisa discopunctana* Frnld. Tr. Am. Ent. Soc. 10 22 sp. 110 (1882)<sup>6</sup> ; Smith Ins. NJ. 493 (1900)<sup>7</sup>. *Coelostathma discopunctana* Frnld. Bull. US. Nat. Mus. 52 477 sp. 5344 (1902)<sup>8</sup> ; Krft. Smith's Check List Lp. Bor-Am. 105 sp. 5761 (1903)<sup>9</sup> ; Frnld. Gn. Tort. 39, 59 (1908)<sup>10</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-10</sup>—ATLANTIC STATES<sup>8</sup>—MAINE<sup>6</sup>—MASSACHUSETTS<sup>3, 6</sup>—NEW YORK<sup>3, 6</sup>—PENNSYLVANIA<sup>1-3, 6</sup>—NEW JERSEY: VI, VIII<sup>7</sup>—MARYLAND (3081 *Mus. Joannis*)—DISTRICT OF COLUMBIA<sup>5, 6</sup>: Washington, D Clover, VIII-IX, ex. VIII-IX<sup>5, 6</sup>—NORTH CAROLINA: 1883 (*H. K. Morrison*)—MISSOURI<sup>6</sup>—TEXAS (*J. Boll*)<sup>4, 6</sup>. Central America—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*).

2. *Coelostathma binotata*, sp. n.

*Antennae* ♂ biciliate 1 ; fawn-whitish. *Palpi* reaching about the length of the head beyond it ; fawn-white, slightly shaded on the outer sides. *Head* fawn-white. *Thorax* pale fawn-brownish. *Forewings* fawn-whitish, with a slight brownish tinge and some pale brown reticulations, especially on the outer half of the wing ; on the costa are two dark brown, somewhat triangular, patches, in which are some dark fuscous scales preceded, and sometimes more or less connected, by dark brownish fuscous dots along the extreme costa—the first, beginning before the middle, its outer angle extending a little beyond the middle, a slender outwardly oblique streak of the same colour arising from the dorsum opposite to its base, with sometimes a slight shade in its outer side, but not reaching the apex of the costal triangle ; the second, commencing at three-fourths from the base, reaching nearly to the apex, with a few dark scales along its inner edge and beyond its middle ; the first sometimes accompanied by some chestnut-brown which is more or less continued in a slender curved line running through the reticulated terminal area to the tornus ; there is also sometimes a dark fuscous dot at the outer end of the cell and another, at the lower edge of the fold, at about one-fifth from the base ; cilia pale fawn, with a brownish tinge, stronger along their basal half. *Exp. al.* 11-12 mm. *Hindwings* rather shining, pale stone-grey, with brownish reticulations toward the apex, more apparent and more diffused in the ♀ which is also generally somewhat darker on the forewings than the ♂ ; cilia pale stone-greyish. *Abdomen* brownish grey. *Legs* fawn-white.

*Type* ♂ (66331) ; ♀ (66332) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66338-41, 66345) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Seventeen specimens.

BIOL. CENTR.-AMER., Heter., Vol. IV., February 1913.

2 ee



## EPAGOGÉ Hb.

=§*PHILEDONE* Hb.; =*AMPHISA* Crt. (†*AMPHYSA* Gn.); =*CAPUA* Stph.; =*DICHELLIA* Gn.; =§*TERATODES* Gn.; =*BATODES* Gn.; =\**DITULA* Stph. (*nec* Stph. + Wstwd.); =*HASTULA* Mill.; =*SPERCHIA* Wkr.; =*EPITYMBIA* Meyr.

Type 1: *Tortrix gerningana* S-D. (= *pectinana* Hb., Cat. 1828; Stph. 1834).

*AMPHISA* Crt. = §*PHILEDONE* Hb. Verz. Schm. 389 sp. 3781-3 (1826); Stph. Ill. Br. Ent. Haust. 4 81-2 no. 278 sp. 1 (1834), 420 no. 1144 sp. 3781 (1835); Wstwd. Syn. Gn. Br. Ins. 107 (1840). *AMPHISA* Crt. Br. Ent. 5 expl. Pl. 209 sp. 1-2 (1828). *AMPHYSA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 141 no. 4 (1845); Eur. Micr. Ind. Meth. 7 (1845); Stgr. Wk. Cat. Lp. Eur. 239 no. 101 M. sp. 761-3 (1871). *AMPHISA* Z. Verh. ZB. Ges. Wien 25: 1875 Abh. 234 (1875). *PHILEDONE* Meyr. Hb. Br. Lp. 518, 526-7 no. 3 sp. 1-2 (1895). *AMPHISA* Stgr-Rbl. Cat. Lp. Pal. 2 84 no. 219 sp. 1482-8 (1901); Knl., Splr. Schm. Eur. 2 245 no. 2 sp. 1-7 Pf. 83·25-8 (1907). *PHILEDONE* Frnld. Gn. Tortr. 15, 18, 58 (1908); Knl. Zool. 21 (54. Pal. Tortr.) 59 Pf. 1·14-16, 6·3-15 (1908), 101-6 no. 2 sp. 1-7 (1910).

[§*Philedone* Hb. is too close to *PHILEDON* Cuv. (1817) *Aves*, and should be sunk in favour of *Amphisa* Crt. so far as *gerningana* is concerned, but *Epagoge* Hb. should be adopted for any genus containing *grotiana* F.]

Type 2: *Pyrallis grotiana* F. (Stph. 1834; Meyr. 1895).

*EPAGOGÉ* Hb. Verz. Schm. 389 sp. 3784-6 (1826). *LOZOTAENIA* (B. c. *EPAGOGÉ* Hb.) Stph. Ill. Br. Ent. Haust. 4 79-80 sp. 24-5 (1834), 420 no. 1145 sp. 3785-6 (1835). *DICHELLIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 141 (1845); Eur. Micr. Ind. Meth. 7 (1845); Stph. List Br. An. BM. 10 Lp. 9 no. 5 sp. 1 (1852); Stgr-Wk. Cat. Lp. Eur. 239 no. 101 L sp. 753-60 (1871); Frnld. Tr. Am. Ent. Soc. 10 21-2 sp. 104-9 (1882). *EPAGOGÉ* Meyr. HB. Br. Lp. 518, 527 no. 4 sp. 1-2 (1895); Wlsm. BM. Mon. Xmas Id. 78-9, 308 sp. 7 (1900); Ann-Mag. NH. (7 s.) 5 483-5 (1900). *DICHELLIA* Stgr-Rbl. Cat. Lp. Pal. 2 84-5 no. 221 sp. 1490-1501 (1901). *EPAGOGÉ* Frnld. Bull. US. Nat. Mus. 52 475-6 sp. 5329-34 (1902); Krft. Smith's Check List Lp. Bor-Am. 105 sp. 5746-51 (1903); Meyr. Jr. Bomb. NH. Soc. 16 588-9 (1905); 17 977-8 (1907); 18 617-9 (1908). *DICHELLIA* Knl., Splr. Schm. Eur. 2 246 no. 4 sp. 1-5 Pf. 83·30-1 (1907). *EPAGOGÉ* Wlsm. Fn. Haw. 1 709-11, 753 no. 50 sp. 410-13 Pf. 12 7-10 (1907); Frnld. Gn. Tortr. 15, 29, 36, 58 (1908); Knl. Zool. 21 (54. Pal. Tortr.) 58 Pf. 1·12-13, 6·17-31 (1908), 108-16 no. 4 sp. 1-15 tf. 109·7 (1910).

Type 3: *Tortrix favillaceana* Hb. (= *ochraceana* Stph.; Stph. 1834).

*CAPUA* Stph. = Genus 276 (1059) — Stph. Syst. Cat. Br. Ins. 2 189 no. 276 sp. 7111 (1829). *CAPUA* Stph. Ill. Br. Ent. Haust. 4 171-2 no. 304 sp. 1 (1834). §*TERATODES* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 168 (1845); Eur. Micr. Ind. Meth. 34 (1845). *CAPUA* Stph. List Br. An. BM. 10 Lp. 68 no. 53 sp. 1 (1852); Stgr-Wlk. Cat. Lp. Eur. 240 no. 101 N sp. 764 (1871); Meyr. HB. Br. Lp. 518, 527-8 no. 5 sp. 1-2 (1895); Wlsm. Ann-Mag. NH. (7 s.) 5 482-3 (1900); Wlsm. & Drnt. Cat. East. & Austr. Lp-Het. Oxf. Mus. 2 575 sp. 3690 (1900); Stgr-Rbl. Cat. Lp. Pal. 2 85 no. 222 sp. 1502-4 (1901); Frnld. Bull. US. Nat. Mus. 52 477 sp. 5342-3 (1902); Krft. Smith's Check List Lp. Bor-Am. 105 sp. 5759-60 (1903); Knl., Splr. Schm. Eur. 2 246 no. 5 sp. 1-3 Pf. 83·32-3 (1907); Wlsm. Fn. Haw. 1 703-9, 753

no. 49 sp. 400-9 Pf. 11·25 - 12·6 (1907); Frnld. Gn. Tortr. 27, 31, 59 (1908); Meyr. Jr. Bomb. NH. Soc. 18 614 (1908); Pr. Linn. Soc. NSW. 35 162, 183-203 no. 19 sp. 70-121 (1910); Tr. NZ. Inst. 43:1910 81-2 no. 5 sp. 18-23 (1911); Tr. Ent. Soc. Lond. 1911 674-5 (1912); Exot. Microlep. 1 1-2 (1912). CACOECIA Hb. (CAPUA Stph.) Knl. Zool. 21 (54 Pal. Tortr.) 57 Pf. 1·29-32, 6·32-7 (1908), 119-23 no. 6 sp. 1-4 tf. 120·9 (1910).

[§ *Teratodes* Gn. is homonymous with *TERATODES* Brullé (1835) *Orthopt.*, and Koch (1838) *Aves.*]

Type 4: *Tortrix angustiorana* Hw. (= *dumeriliana* Dp.; Gn. 1845).

BATODES Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 174 (1845); Eur. Micr. Ind. Meth. 40 (1845). \**DITULA* [Stph. (p.) Syst. Cat. Br. Ins. 2 172 no. 250 sp. 6882-90 (1829); Ill. Br. Ent. Haust. 4 82-6 no. 279 sp. 1-9 (1834); Wstwd. Syn. Gen. Br. Ins. 107 (1840). Type: *profundana* S-D.] Stph. List Br. An. BM. 10 Lp. 41 no. 30 sp. 1 (1852). *TORTRIX* (BATODES Gn.) Stgr-Wk. Cat. Lp. Eur. 239 no. 101 I. sp. 750-1 (1871) [Frnld. Gn. Tortr. 31, 59 (1908)].

Type 5: *Hastula hyerana* Mill. (Mill. 1858).

HASTULA Mill. Ann. Soc. Ent. Fr. 26 (3 s. 5: 1857) 799-805 Pf. 14·III·1-6 (1858); Frnld. Gn. Tortr. 36, 58 (1908).

Type 6: *Sperchia intractana* Wkr. (Wkr. 1869).

SPERCHIA Wkr. Char. Undescr. Lp-Het. 64, 83 sp. 41 (1869); Frnld. Gn. Tortr. 40, 60 (1908) [Meyr. Pr. Linn. Soc. NSW. 35 183 (1910)].

Type 7: *Epitymbia alaudana* Meyr. (Meyr. 1881).

EPITYMBIA Meyr. Pr. Linn. Soc. NSW. 6 634, 657-9 no. 11 sp. 1 (1881); Frnld. Gn. Tortr. 43, 61 (1908) [Meyr. Pr. Linn. Soc. NSW. 35 183 (1910)].

### 1. *Epagoge schausiana*, sp. n.

*Antennae* biciliate with tufts 4-5, yellowish brown. *Palpi* projecting twice the length of the head beyond it, acuminate, slightly drooping; hoary grey, speckled with fuscous. *Head* and *Thorax* hoary greyish, with some blackish scaling. *Forewings* elongate, widened outward, costa evenly arched near the base, termen oblique not sinuate; hoary grey, somewhat speckled and blotched with black; a black blotch, on the fold at one-fourth, extending upward and obliquely backward toward a spot of the same colour on the costa; a black blotch on the end of the cell, also diffused backward to the middle of the costa, is connected with a similar blotch below and before it; on the outer half of the costa are some blackish spots, from the outer one of which a curved broken line of black scale-patches extends to the tornus (these markings vary in their intensity in different specimens, having a tendency to resolve themselves into broken transverse lines); cilia hoary greyish. *Exp. al.* 32-33 mm. *Hindwings* whitish, with a brownish fuscous suffusion; cilia smoky whitish. *Abdomen* smoky grey. *Legs* smoky greyish.

Type ♂ (4671); ♀ (4673) Mus. Wlsm. [PT. (4672) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft. (*W. Schaus*). Five specimens.

The ♀ has the forewings suffused with greyish fuscous and the lines of black blotches are obliterated, being replaced by inconspicuous darker spots mixed with bright reddish ferruginous, there is, however, a somewhat more conspicuous black blotch below the fold at one-fourth from the base; the thorax is greyish fuscous in front, dark fuscous posteriorly.

## 2. *Epagoge vinolenta*, sp. n.

*Antennae* biciliate  $2\frac{1}{2}$ ; pale ochreous. *Palpi* projecting twice the length of the head beyond it, acuminate, slightly drooping; pale ochreous. *Head* and *Thorax* pale ochreous. *Forewings* elongate, widened outwardly, the costa gently and evenly arched, termen oblique, very slightly sinuate below the apex; pale ochreous, shaded with fawn-brown on an ill-defined basal patch to one-fourth, and on the apical half of the wing, into which the pale ground-colour encroaches obliquely above the middle and in a sinus beyond the end of the cell; in certain lights the whole wing, but especially the darker portions of it, shows a delicate vinous reflection, in which tawny red, blue, and some green are distinguishable; it is also sparsely speckled throughout with greyish atoms; cilia pale ochreous, a fawn-brown line along their base. *Exp. al.* 25–26 mm. *Hindwings* shining, whitish, the flexus shaded with smoky grey, the wing-surface speckled with the same colour throughout. *Abdomen* and *Legs* brownish ochreous. *Type* ♂ (4688); ♀ (4689) Mus. Wlsm. BM. [PTT. (4691, 4695–6; 6012–3, 6016–7 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft. (*W. Schaus*): MEXICO: Popocatepetl, 8000 ft., VI. 1906 (*W. Schaus*). Fifteen specimens.

The specimens from Popocatepetl are somewhat greyer than the Type, but they are not in very good condition and with such material could not be described as distinct.

## 3. *Epagoge spadicea*, sp. n. (Tab. VII. fig. 6.)

*Antennae* fulvous. *Palpi* projecting thrice the length of the head beyond it; tawny reddish. *Head* and *Thorax* tawny reddish. *Forewings* tawny reddish, with a shining purplish grey suffusion, through which appear several oblique, transverse, rich chestnut-red streaks, of which the most conspicuous occur at one-fourth from the base, at a little before the middle, and at one-third from the apex; cilia ochreous, with a reddish grey line along their base. *Exp. al.* 27 mm. *Hindwings* and cilia shining, straw-white. *Abdomen* whitish ochreous. *Legs* pale straw-colour. *Type* ♀ (66391) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VIII. (*H. H. Smith*). Unique.

## 4. *Epagoge niveigutta*, sp. n.

*Antennae* strongly biciliate 2; reddish brown at the base, paler beyond. *Palpi* extending nearly twice the length of the head beyond it; tawny fawn-colour. *Head* tawny fawn, the front covered with closely packed scales. *Thorax* tawny fawn. *Forewings* tawny fawn, with a reduplicated snow-white spot beyond the middle of the dorsum; this is set in a small diffused patch of bright orange-ochreous, and is divided into two portions by the fold which passes through its middle; cilia at the tornus greyish, above ochreous. *Exp. al.* 22 mm. *Hindwings* dark greyish fawn, some thickened scaling towards the base inclining to ochreous; cilia shining, pale grey, their base slightly shaded throughout. *Abdomen* greyish, with a lateral whitish streak on the fringes of the anal claspers; underside ochreous, anal segments grey. *Legs* pale cinereous.

*Type* ♂ (66394) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66395) US. Nat. Mus.]

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1880 (*G. C. Champion*). Two specimens.

It is possible that this may be the ♂ of *tessellata* Wlsm., of which the ♀ only is known—in any case they are very closely allied.

5. *Epagoge tessellata*, sp. n.

*Antennae* cinereous, reddish brown at the base. *Palpi* projecting three times the length of the head beyond it; cinereous. *Head* cinereous. *Thorax* greyish fuscous, mottled with reddish brown. *Forewings* suffused with tawny fuscous through which a bright reddish ochreous ground-colour is partially apparent, the same appearing clearly in an outwardly angulate short basal patch, in two costal patches, one before, and one beyond the middle and in a less clearly defined dorsal patch about the middle; the first costal patch is outwardly oblique and somewhat larger than the lunate costal patch beyond it, each of these patches is thickly studded with white spots, three white spots being more conspicuous than the others—one at the outer angle of the basal patch, one at the upper edge of the dorsal patch, and one a little above and before it at the lower extremity of the first costal patch; cilia tawny fuscous, with some pale ochreous scales along the middle of the termen below the somewhat produced apex. *Exp. al.* 27 mm. *Hindwings* greyish fuscous; cilia paler, with a slender ochreous line along their base. *Abdomen* (missing). *Legs* whitish ochreous.

*Type* ♀ (66392) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66393) US. Nat. Mus.]

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1880 (*G. C. Champion*). Two specimens.

This may possibly be the ♀ of *niveigutta* Wlsm., a closely allied species of which the ♂ only is known.

6. *Epagoge flaviciliana*, sp. n. (Tab. VII. fig. 7.)

*Antennae* ♀ reddish brown at the base, paler beyond. *Palpi* projecting twice the length of the head beyond it, elongate, triangular, terminal joint short; reddish brown externally, whitish on their inner sides. *Head* reddish brown, with slight projecting frontal tuft. *Thorax* reddish brown. *Forewings* reddish brown, with some scattered transverse dark fuscous speckling and a spot of the same on the dorsum at one-fourth from the base; two triangular bright yellow costal spots, their edges shining ferruginous, the first about the middle, the second smaller and much nearer to the apex; cilia bright yellow, tending to ferruginous at the apex, where there is a short transverse fuscous streak, and along their base, where they are preceded by some fuscous scales on the termen, at the tornus greyish. *Exp. al.* 26 mm. *Hindwings* greyish fuscous; cilia somewhat paler. *Abdomen* greyish. *Legs* pale cinereous.

*Type* ♀ (66396) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*). Unique.

Very similar in appearance to *Ctenopseustis ningorana* Wlsm., but the costal markings are yellowish instead of white; the stalking of FW: 7–8 and the less excavate termen also easily distinguish *flaviciliana*.

## ATTERIA Wkr.

*Type*: *Atteria strigicinctana* Wkr. (Wkr. 1863).

ATTERIA Wkr. Cat. Lp. BM. 28 421–2 no. 44 sp. 1 (1863); Druce Ent. Mo. Mag. 48 133 Pf. 10 · 8 (1912). [*nec* Auct.]

*Forewings* 12 veins; 7–8 stalked, enclosing the apex; rest separate, 2 from before three-fourths; 1 basally furcate. *Hindwings* 8 veins; 3–5 somewhat approximate, but separate and almost equidistant; 6–7 approximate toward base; cubitus impectinate.

The only known species which can be included in this genus are:

1. *strigicinctana* Wkr. (1863: *Atteria*) Cat. Lp. BM. 28 422 (*Bogota*).
2. *drucei* Wlsm., sp. n. (*Chiriqui*).
3. *docima* Druce (1912: *Atteria*) Ent. Mo. Mag. 48 133 Pf. 10 · 8 (*Peru*).
4. *transversana* Wkr. (1863: *Gauris*?) Cat. Lp. BM. 28 421 (*Venezuela*).

The Type of *Atteria strigicinctana* Wkr. is wrongly recorded as a ♂, it is a ♀ with divided frenulum; the Types of *docima* Druce and *transversana* Wkr. are both ♂ ♂ with strongly bipectinate antennae; such antennae will probably be characteristic of the genus, which is easily recognised by the shape of the forewings as well as by the neurulation.

Most of the species described as belonging to the genus *Atteria* must be referred to **PSEUDATTERIA**, gen. n. [FW: 12 veins; 7-8 separate, 7 to costa. HW: 8 veins; 3-4 connate, 5 straight, not approximate to 4; 6-7 closely approximate toward base. *Type*: *Pseudatteria potamites*, sp. n. (FW: reddish orange, costa with alternate stripes of purplish fuscous and white, to the number of nine of each, all parallel; the first two white streaks joined in the form of letter U; at apex a V-shaped fuscous mark, followed by alternations of white and fuscous to tornus. *Exp. al.* 26-33 mm. HW: reddish orange, with a group of three purplish fuscous spots around apex, and a series of about five spots below). *Type* ♂ ♀ (4601-2) Jalapa, etc. Mus. Wlsm. BM.]

Another series of species must be referred to **IDOLATTERIA**, gen. n. [FW: 12 veins; 7-8 separate, 7 to termen. HW: 8 veins; 3-4 separate, 5 closely approximate to 4; 6-7 closely approximate toward base. *Type*: *Idolatteria simulatrix*, sp. n. (FW: reddish orange, with dark reddish purple costal streaks, including a spot at the apex, alternating with white spaces, a few white scales at the base; about six smaller purplish spots occur along the termen. *Exp. al.* 25 mm. HW: reddish orange, with eight purplish marginal spots, and a shorter submarginal series.) *Type* ♀ (66270) San Gerónimo, Mus. Wlsm. (*Godm-Salv. Coll.*) BM.]

Meyrick [Tr. Ent. Soc. Lond. 1909 14-15 (1909): 1910 433 (1910): Pr. Linn. Soc. NSW. 35 161, 221-2 no. 28 sp. 154 (1910)] united *Atteria* Wkr. and *Cerace* Wkr., sinking the latter as a synonym, but he has since proposed the new genus *Megalodoris* Meyr. [Exot. Microlep. 1 5-6 (1912)] for the Eastern species which he had described as *Atteria*.

### 1. *Atteria drucei*, sp. n. (Tab. VII. fig. 4.)

*Antennae* purplish black. *Palpi* ♀ short, suberect, projecting scarcely the length of the head beyond it; black. *Head* pale yellow on the crown. *Thorax* orange, shaded with purple in front, and with one median and two posterior purple spots; tegulae orange, with a purple median spot. *Forewings* with the costa arched, but somewhat flattened beyond the middle, apex obtuse, but approximately rectangular, the termen slightly sinuate below it, but distinctly convex; deep orange, with a series of about thirteen costal, one apical, and six terminal pale yellow stripes alternating with dark purple, some, especially about the apex and below it, tending to coalesce before reaching the orange ground-colour; the deep purple intermediate stripes blending to reddish purple as they come within the influence of the orange



on which they enroach, breaking up into more or less rounded spots—over forty of these being distributed over the remainder of the wing-surface; cilia orange and dark purple alternately, corresponding with the adjacent marginal colours. *Exp. al.* 37–40 mm. *Hindwings* deep orange, blotched with purplish black, especially around the apex and termen, and above the flexus; about six pale yellow spots occur in the purplish black terminal cilia. *Abdomen* purplish black, with five or six orange transverse bands. *Legs* purplish black, with orange spots on the tibiae, and small pale yellow spots on the tarsi.

*Type* ♀ (6150, *Chiriqui*, Wlsm. Det. 1908) Mus. Druce. [*PT.* (400151) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* Central America (*O. Salvin*, 400151)—PANAMA: CHIRIQUI: Chiriqui (*Arcé*).  
Two specimens.

I owe my best thanks to Mr. Herbert Druce for kindly permitting me to study his types of *Acrolophidae* and *Atteria*, and to describe this new species.

### PLATYNOTA Clms.

= CERORRHINETA Z. (*CERATORRHINETA*, Kby., Wlsm.).

*Type* 1: *Hypena idaealis* Wkr. (*†idaeusalis* Wkr.; = *sentana* Clms., Frnld. 1908).

PLATYNOTA Clms. Pr. Ac. Nat-Sc. Phil. 12 347–8 (1860); Wkr. Cat. Lp. BM. 30 993 (1864); Z. Verh. ZB. Ges. Wien 25: 1875 Abh. 235–9 sp. 29–32 (1875); Wlsm. Ill. Typ. Lp-Het. BM. 4 p. ix, 5–6 Pf. 62 · 1 (1879); Frnld. Tr. Am. Ent. Soc. 10 22–3 sp. 113–8 (1882); Wlsm. Pr. Z. Soc. Lond. 1891 499, 543 no. 12 sp. 21–2 (1892); Tr. Ent. Soc. Lond. 1895 496–7 Pf. 12 · 1 (1895); Pr. Z. Soc. Lond. 1897 134–5 no. 77 sp. 193–7 (1897); Frnld. Bull. US. Nat. Mus. 52 481–2 sp. 5382–90 (1902); Krft., Smith's Check List Lp. Bor-Am. 106 sp. 5799–807 (1903); Frnld. Gn. Tortr. 38, 59 (1908).

*Type* 2: *Cerorhineta calidana* Z. (Z. 1877).

CERORRHINETA Z. Hor. Soc. Ent. Ross. 13 116–7 sp. 1 (1877). *CERATORRHINETA* Kby. Zool. Rec. 15: 1878 Ins. 227, Ind. 3 (1880); Wlsm. Pr. Z. Soc. Lond. 1891 499–500, 543 no. 13 sp. 23 Pf. 41 · 2<sup>a-e</sup> (1892); 1897 133 no. 76 sp. 192 (1897). CERORRHINETA Frnld. Gn. Tort. 41, 60 (1908).

### 1. *Platynota rostrana* Wkr.

= *restitutana* Wkr.<sup>4</sup>; = *connexana* Wkr.<sup>4</sup>.

*Teras rostrana* Wkr. Cat. Lp. BM. 28 290 sp. 42 (1863)<sup>1</sup>. *Teras restitutana* Wkr. Cat. Lp. BM. 28 292 sp. 47 (1863)<sup>2</sup>. *Teras connexana* Wkr. Cat. Lp. BM. 28 293 sp. 49 (1863)<sup>3</sup>. *Platynota rostrana* Wlsm. Ill. Typ. Lp-Het. BM. 4 p. ix, 5–6 Pf. 62 · 1 (1879)<sup>4</sup>. *Tortrix rostrana* Cmstk. US. Dp. Agr. Rp. Ent. 1880 253 (1881)<sup>5</sup>. *Platynota rostrana* Frnld. Tr. Am. Ent. Soc. 10 22 sp. 114 (1882)<sup>6</sup>; Wlsm. Pr. Z. Soc. Lond. 1891 499, 543 sp. 21 (1892)<sup>7</sup>; 1897 134 sp. 195 (1897)<sup>8</sup>; Frnld. Bull. US. Nat. Mus. 52 481 sp. 5383 (1902)<sup>9</sup>; Krft., Smith's Check List Lp. Bor-Am. 106 sp. 5800 (1903)<sup>10</sup>.

*Types*: *rostrana* Wkr. ♀ (1846: 110, *United States*); *restitutana* Wkr. ♀ (1855: 1, *St. Domingo*); *connexana* Wkr. ♀ (1847: 9, *Venezuela*) BM.

*Hab.* AMERICA, N–S–I. United States<sup>1, 4–10</sup>—FLORIDA<sup>5–9</sup>, ⊕ Orange<sup>5–8</sup>, I–II, V<sup>5, 8</sup>.  
Central America—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000 ft., VIII. 1880 (*G. C. Champion*): ESCUINTLA: Pantaleon, 1700 ft., I. 1881 (*G. C. Champion*)—PANAMA:

CHIRIQUI: Chiriqui (*Ribbe*; *Mus. Stgr.* 50 Wlsm. Det. 1891): PANAMA: Colon, 1907 (*A. Busck*). South America<sup>1, 3-4 6-9</sup>—COLOMBIA: CUNDINAMARCA: Bogota (*Birchall*)—VENEZUELA (*D. Dyson*)<sup>3-4, 6-9</sup>—BRAZIL<sup>1, 4, 7-8</sup>: AMAZONS<sup>1, 4, 7-8</sup>: Ega (*H. W. Bates*)<sup>1, 4, 7-8</sup>; Santarem (*H. W. Bates*). West Indies<sup>1-2, 4, 6-9</sup>—SAN DOMINGO (*Tweedie*)<sup>1-2, 4, 6-9</sup>—ST VINCENT (*H. H. Smith*)<sup>7-8</sup>—GRENADA, III-V (*H. H. Smith*)<sup>8</sup>.

The Type of *connexana* Wkr. was wrongly recorded as a ♂—the specimen is a ♀.

## 2. *Platynota rubiginis*, sp. n.

*Antennae* ♂ biciliate 1; greyish fuscous. *Palpi* brownish ochreous, much suffused with fuscous above, the terminal joint rust-brown at the apex on the underside. *Thorax* brownish ochreous, mixed with fuscous and rust-brown, paler ochreous posteriorly. *Forewings* with a short lunate costal fold at the base; narrowly stained along the costa and termen, and toward the base of the dorsum, with rich rust-brown dotted with dark fuscous and sprinkled with a few shining steely metallic scales, especially along the base of the brownish ochreous terminal cilia; the dark fuscous dots on the costa, although more or less continuous, are grouped in two somewhat triangular patches, one before, and one beyond the middle, from each of which slender, obliquely curved, lines descend to the dorsum; there is a small raised spot at the end of the cell and a patch of dark raised scales below the fold beyond the flexus. *Exp. al.* 15 mm. *Hindwings* rather bright ochreous, with slightly paler cilia, through which runs a darker shade-line. *Abdomen and Legs* (broken).

Type ♂ (66458, *San Gerónimo*); ♀ (66460, *V. de Atitlan*) *Mus. Wlsm.* (*Godm-Salv. Coll.*) BM. [PT. (66459) *US. Nat. Mus.*]

*Hab.* Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1880 (*G. C. Champion*): SOLOLA: Volcan de Atitlan, 2500–3500 ft., XII. 1880 (*G. C. Champion*). Four specimens.

The ♀ Type (66460) from the Volcan de Atitlan lacks the strong rust-coloured stain along the costa and the base of the dorsum, and shows a rather conspicuous dark quadrate patch beyond the middle of the dorsum.

Allied to 5385 *labiosana* Z., from which it differs in the position of the costal marks and the lines which emanate from them, and, especially, in the rust-coloured margin to the costa and termen.

## 3. *Platynota subargentea*, sp. n. (Tab. VII. fig. 9.)

*Antennae* brown. *Palpi* brown, a few dark fuscous scales intermixed. *Head* brownish. *Thorax* shining, silvery grey. *Forewings* shining, silvery grey, with transverse lines and spots of raised scales; the costa from near the base is shaded with brown, which extends around the apex to below the middle of the termen; some dark fuscous scaling accompanies this shade, especially in the costal patch before the middle, and in a smaller one beyond the middle, as well as around the apex; there is also a rusty brown shade beyond the middle of the dorsum containing two or three raised patches of silvery grey and sub-ochreous scales; below the middle of the fold is a small spot of raised dark fuscous scales; cilia rusty brown along their base, whitish ochreous beyond. *Exp. al.* 19 mm. *Hindwings* chestnut-brown; cilia paler, with some shining greyish scales, tending to fuscous at the extreme apex. *Abdomen* brownish. *Legs* brownish ochreous.

Type ♀ (67069) *Mus. Wlsm.* (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Caché (*H. Rogers*). Unique.

#### 4. *Platynota obliqua*, sp. n.

*Antennae* fawn-grey. *Palpi* fawn-grey. *Head* and *Thorax* fawn-grey, the latter shaded at the sides with fawn-brown. *Forewings* three times as long as broad; pale stone-grey, with a short oblique costal streak near the base; a very oblique fascia, commencing narrowly on the costa at one-fourth, partially interrupted on the cell, and dilated outward below it nearly to the tornus; an elongate costal shade, commencing before the middle, reaching nearly to the apex, and almost connected at its outer extremities with a narrower shade along the termen; and three semidetached spots opposite to the end of the cell—these markings are all fawn-brown, with a few groups of dark fuscous scales intermixed, especially around their edges; there is a slight fuscous streak along the base of the fold, and a series of fuscous spots along the basal half of the otherwise pale fawn-brown cilia. *Exp. al.* 16 mm. *Hindwings* pale cupreous; cilia shining, greyish. *Abdomen* stone-grey. *Legs* whitish ochreous.

*Type* ♀ (66348, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66349; 5987 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* Central America—MEXICO: TABASCO: *Teapa*, III. (*H. H. Smith*)—COSTA RICA: Zent District, II. 1907 (*W. Schaus*); Banana River, III. 1907 (*W. Schaus*). Five specimens.

#### 5. *Platynota offuscata*, sp. n.

*Antennae* ♂ biciliate  $\frac{1}{2}$ ; greyish fuscous. *Palpi*, *Head* and *Thorax* greyish fuscous, with a slight brownish tinge. *Forewings* almost entirely suffused with brown and dark brownish fuscous, the latter colour, although partially mottled with paler shades, occupying the whole space above the basal half of the fold, from which it runs in an oblique line to the costa at five-sixths from the base, forming a large elongate triangular patch; the fold itself is narrowly stained with rust-brown, and in the paler space beyond the dark triangle are spots of raised scales—one in the fold brownish ochreous; one at the end of the cell mixed brownish ochreous and dark brownish fuscous; one beyond the latter dark brownish fuscous, and another of the same colour before the apex, where it forms the upper and inner angle of an elongate triangular terminal shade tapering toward the tornus; cilia brownish ochreous. *Exp. al.* 15.5–19 mm. *Hindwings* greyish fuscous, tinged along the limbus from base to flexus with ochreous; cilia rather paler, with a dark shade-line before their middle. *Abdomen* ochreous at the base, greyish fuscous beyond. *Legs* pale brownish ochreous.

*Type* ♂ (67080); ♀ (67081) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., IX–X. 1880 (*G. C. Champion*). Two specimens.

#### 6. *Platynota capella*, sp. n.

*Antennae* simple; fawn-brown. *Palpi* porrect to nearly twice the length of the head beyond it; fawn-brownish, with a few darker scales. *Head* and *Thorax* brownish fuscous, the latter tinged with pale fawn posteriorly. *Forewings* with a strong costal fold in the ♂, tapering outward to beyond the middle; greyish fawn, tinged with fawn-brownish along the region of the fold, and suffused with dark brownish fuscous along the costa and upper edge of the cell; this suffusion terminated obliquely outward to the costa before the apex which is occupied by a triangular transverse patch in which are darker lines; some oblique lines of raised scales run through the pale ground-colour, a small patch occurring on the lower edge of the cell before the middle, others running obliquely from beyond this to the outer half of the dorsum, others again at the outer end of the cell; cilia fawn-grey, slightly darker speckled, at the apex brownish fuscous. *Exp. al.* 21–24 mm. *Hindwings* rather dark brownish grey; cilia with a pale line along their base. *Abdomen* brownish fuscous. *Legs* fawn-brownish.

*Type* ♂ (66351, *Cerro Zunil*); ♀ (66352, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (5983 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* Central America—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000 ft., VIII–IX. BIOL. CENTR.-AMER., Heter., Vol. IV., February 1913. 2 ff

1880 (*G. C. Champion*): BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*)—  
PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Three specimens.

The ♀ of this species (if, as I believe, rightly identified) is larger and without the darkened costa, but with an indication of an oblique transverse shade-band and more distinct slender lines of raised scales.

### 7. *Patynota albescens*, sp. n. (Tab. VII. fig. 8.)

*Antennae* ♂ biciliate  $1\frac{1}{2}$ ; pale fawn. *Palpi* porrect, tapering, pointed, reaching nearly twice the length of the head beyond it; white. *Head* fawn-white. *Thorax* pale fawn-brownish. *Forewings* with a narrow costal fold in the ♂, tapering outward from near the base to the middle of the costa; brownish white, with subreticulate pale fawn-brownish markings, in each of which some of the scales are tipped with blackish; a series of costal spots and three on the fold are small, one at the end of the fold and three others beyond it rather larger—all blackish; from the outer four arise oblique slender lines of brownish reticulation with a slight suffusion about their base, forming a cloudy shade which is repeated on the dorsum, before the tornus, where it is angulated inward with some blackish scaling, and irregularly diffused upward to a blackish spot at the end of the cell; at about one-fourth from the base are two dark dots placed obliquely on the cell; a projecting tuft of long brownish ochreous scales occupies the flexus, with a small tuft of raised scales of the same colour above it near the base; cilia white. *Exp. al.* 17 mm. *Hindwings* white, with many brownish grey reticulations, more plainly shown on the underside; cilia white, with a dividing shade-line along their middle. *Abdomen* brownish grey. *Legs* white.

*Type* ♂ (66350) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

Allied to 5386 *exasperatana* Z.

### 8. *Platynota stultana* Wlsm.

*Platynota stultana* Wlsm. Tr. Ent. Soc. Lond. 1884 127-8 (1884)<sup>1</sup>.

*Type* ♂ (35729) Mus. Wlsm. BM. [*PT.* (35731) US. Nat. Mus.]

*Hab.* MEXICO<sup>1</sup>: SONORA<sup>1</sup>: 1883 (*H. K. Morrison*).

### AMORBIA Clms.

= HENDECASTEMA Wlsm.; = PTYCHAMORBIA Wlsm.

Type 1: *Amorbia humerosana* Clms. (Clms. 1860).

AMORBIA Clms. Pr. Ac. Nat-Sc. Phil. 12 352 (1860); Wkr. Cat. Lp. BM. 30 992 (1864); Frnld. Tr. Am. Ent. Soc. 10 19 sp. 85-6 (1882); Bull. US. Nat. Mus. 52 485 sp. 5429-30 (1902); Krft., Smith's Check List Lp. Bor-Am. 106 sp. 5848-9 (1903); Frnld. Gn. Tortr. 39, 41, 59 (1908).

Type 2: *Hendecastema cuneanum* Wlsm. (Wlsm. 1879).

HENDECASTEMA Wlsm. Ill. Typ. Lp-Het. BM. 4 p. ix, 4-5 Pf. 61·8-10 (1879); Frnld. Gn. Tortr. 41, 59 (1908).

Type 3: *Tortrix exustana* Z. (Wlsm. 1892).

PTYCHAMORBIA Wlsm. Pr. Z. Soc. Lond. 1891 497-9, 543 no. 11 sp. 20 Pf. 41 · 1<sup>a-f</sup> (1892) : 1897 133 no. 75 sp. 191 (1897) ; Frnld. Gn. Tortr. 45, 62 (1908).

The genus *Ptychamorbia* Wlsm., which differed only from *Amorbia* Clms. in the possession of the costal fold and the clothing of the antennae in the ♂, is now abandoned.

### 1. *Amorbia emigratella* Busck.

*Amorbia emigratella* Busck Pr. Ent. Soc. Wash. 11 201-2 (1910)<sup>1</sup>.

Type ♂ ♀ (12777, Oahu) US. Nat. Mus.

*Hab.* HAWAIIA. OAHU<sup>1</sup>: Tantalus<sup>1</sup>, Makiki<sup>1</sup>, ⊕ *polyphag.* (O. H. Swezey)<sup>1</sup>. AMERICA, C-S. Central America<sup>1</sup>—MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Jalapa (W. Schaus<sup>1</sup>; M. Trujillo); Santa Rosa, VI. 1906 (W. Schaus)<sup>1</sup>; Orizaba (W. Schaus)<sup>1</sup>; Cordova, V, IX. (F. Knab): MEXICO<sup>1</sup>: Mexico City, XI. (R. Müller)<sup>1</sup>—COSTA RICA (W. Schaus)<sup>1</sup>. South America—VENEZUELA: Caracas, 3200 ft., 25. III. 1907 (G. B. Longstaff; 6383 Drnt. Det. 1911).

It is perhaps worth recording that a ♀ specimen from Jalapa (4608) with divided frenulum has the neuration of the ♂ (FW: 7-8 coincident).

### 2. *Amorbia concavana* Z.

*Tortrix* (*Cacoecia*) *concavana* Z. Hor. Soc. Ent. Ross. 13 91-3 sp. 4 (1877)<sup>1</sup>.

Type ♂ Mus. Stgr.

*Hab.* Central America—MEXICO: TABASCO: Teapa, I. (H. H. Smith)—GUATEMALA: SAN MARCOS: El Tumbador, 2500 ft., X-XI. 1880 (G. C. Champion): SOLOLA: Panajachel, 30. XII. 1880 (G. C. Champion)—PANAMA<sup>1</sup>: CHIRIQUI (H. Ribbe)<sup>1</sup>; Volcano de Chiriqui, 2000-5000 ft., 1881-2 (G. C. Champion).

### 3. *Amorbia decerptana* Z.

*Tortrix* (*Cacoecia*) *decerptana* Z. Hor. Soc. Ent. Ross. 13 93-4 (1877)<sup>1</sup>.

Type ♂ Mus. Stgr.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—GUATEMALA: SUCHITEPEQUEZ: San Isidro, 1600 ft., IX. 1880 (G. C. Champion)—PANAMA<sup>1</sup>: CHIRIQUI (H. Ribbe)<sup>1</sup>: Bugaba, 800-1500 ft., 1881-3 (G. C. Champion). South America—BRAZIL: ESPIRITO SANTO (Schmid 1872): SANTA CATHARINA (Stevens 1892)—PARAGUAY: Sapucay, 26. XII. 1902 (W. Foster).

### 4. *Amorbia eccopta*, sp. n.

*Antennae* ♂ biciliate 1½; dark fawn-grey. *Pulpi*, *Head* and *Thorax* dark fawn-grey. *Forewings* ♂ with costa abruptly angulate at the base (without costal fold), straight beyond, termen sinuate, tornus



rounded; dark fawn-grey, with a group of blackish spots before the middle of the costa, forming, with one slightly beyond the middle, a triangular pattern; between these and the base is a small triangular blackish spot on the cell, a slender line of dark scales connecting it obliquely backward to the costa; a similar line below it, somewhat interrupted about the fold, connecting it with a small darkened patch at one-third from the base on the dorsum; from the middle group of spots a slender broken line of blackish scales, angulated in its course, terminates beyond the middle of the dorsum; a similar, somewhat broken line, from the outer costal spot ending on the termen above the tornus; beyond it is a slight cupreous shade, with faint indications of other slender transverse lines before the apex; cilia dull ochreous, with a fawn-grey dividing line near their base. *Exp. al.* 20–26 mm. *Hindwings* depressed before the apex on the costa, hind margin sinuate; whitish ochreous, with a fawn-grey shade and blackish reticulations around the apex; cilia whitish ochreous, except at the apex where they are distinctly shaded. *Abdomen* fawn-greyish above, whitish ochreous at the sides and base. *Legs* whitish, tarsi slightly shaded.

*Type* ♂ (66365); ♀ (66366) *Cerro Zunil*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66373; 5998–6000 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab. Central America*—MEXICO: VERA CRUZ: Jalapa, 4500 ft. (*W. Schaus*; *M. Trujillo*); Orizaba (*W. Schaus*): MEXICO: Mexico City (*R. Müller*)—GUATEMALA: ALTA VERA PAZ: Chiacam, 2400 ft., II–III. 1880 (*G. C. Champion*): SOLOLA: Volcan de Atitlan, 2500–3500 ft., 1880 (*G. C. Champion*): QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., VIII–IX. 1880 (*G. C. Champion*): RETALHULEU: Las Mercedes, 3000 ft., 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*). Thirteen specimens.

The ♀ is somewhat larger than the ♂, and the wings are much suffused with greyish fuscous, especially toward the base, in an oblique band across the middle, and on the costa toward the apex; the group of black scales is wanting, and the slender lines of black scales are less distinguishable, except on the outer third of the wing; the hindwings as in the ♂, but more shaded toward the apex.

##### 5. *Amorbia castanea*, sp. n. (Tab. VII. fig. 10.)

*Antennae* greyish fuscous, chestnut-brown about the base. *Palpi* greyish ochreous, the terminal joint and part of the median chestnut-brown. *Head* and *Thorax* dark chestnut-brown. *Forewings* chestnut-brown, with a slight tawny suffusion; a dark greyish fuscous triangular costal patch before the middle, with a black spot on the cell at its lower extremity, in which are a few pale grey scales; this is followed by some greyish fuscous spots beyond the middle of the costa, and on the outer half of the wing several curved lines of smaller spots are traceable, many of these being ornamented with submetallic hoary scales, especially one or two toward the apex; cilia chestnut-brown, changing to pale ochreous outwardly, and with a slender pale ochreous line along their base. *Exp. al.* 28 mm. *Hindwings* greyish fuscous; cilia slightly paler, with a dark dividing shade before their middle. *Abdomen* greyish fuscous; anal tuft inclining to brownish ochreous. *Legs* whitish ochreous.

*Type* ♂ (66361) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., VIII–IX. 1880 (*G. C. Champion*). Unique.

The scales of the cilia in both wings are subspatulate and multifid at their extremities.

### 6. *Amorbia teratana* Z.

*Tortrix* (*Batodes*) *teratana* Z. Hor. Soc. Ent. Ross. **13** 108-9 sp. 12 (1877)<sup>1</sup>.

Type ♂ Mus. Stgr.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI (*H. Ribbe*)<sup>1</sup>.

### 7. *Amorbia rectilineana* Z.

*Tortrix* (*Oenectra*?) *rectilineana* Z. Hor. Soc. Ent. Ross. **13** 115-6 sp. 17 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI (*H. Ribbe*)<sup>1</sup>.

### 8. *Amorbia laterculana* Z.

*Tortrix* (*Oenectra*) *laterculana* Z. Hor. Soc. Ent. Ross. **13** 113-15 sp. 16 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

*Hab.* MEXICO<sup>1</sup>.

### 9. *Amorbia catenana* Wlsm.

*Ptychamorbia catenana* Wlsm. Pr. Z. Soc. Lond. **1891** 498-9, 543 sp. 20 (1902)<sup>1</sup>: **1897** 133 sp. 191 (1897)<sup>2</sup>.

Type ♀ (65116, St. Vincent) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* AMERICA, C-S-I. Central America—PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). South America<sup>1-2</sup>—VENEZUELA: Aroa (*W. Schaus*)—BRAZIL<sup>1-2</sup>: ESPIRITO SANTO (*Schmid*)<sup>1-2</sup>: RIO DE JANEIRO: Rio de Janeiro (*W. Schaus*): SANTA CATHARINA<sup>2</sup>. West Indies<sup>1-2</sup>—ST VINCENT (*H. H. Smith*)<sup>1-2</sup>—GRANADA: V. (*H. H. Smith*)<sup>2</sup>.

### 10. *Amorbia productana* Wkr. (Tab. VII. fig. 11.)

*Dichelia productana* Wkr. Cat. Lp. BM. **28** 320 sp. 11 (1863)<sup>1</sup>.

Type ♂ (1861:21) BM.

*Hab.* AMERICA, N-S. Central America<sup>1</sup>—HONDURAS<sup>1</sup>: Limas (*D. Dyson*). South America—BRAZIL: RIO DE JANEIRO: Organ Mts., near Tijuca (*S. R. Wagner*).

### 11. *Amorbia depicta*, sp. n.

*Antennae* ♂ biciliate  $1\frac{1}{2}$ ; cinereous. *Palpi* projecting twice the length of the head beyond it, much widened with appressed scales above, concealing the terminal joint; tawny brownish, with pale specklings. *Head* and *Thorax* tawny, the latter with two lateral pale tufts behind it. *Forewings* tawny, minutely reticulated with dull, leaden grey, inconspicuous lines containing some slightly raised scales; an oblique basal patch is of a slightly darker shade, covering the broad semi-ovate costal fold, but narrower on the dorsum, where there is a tuft of projecting scales near the base; an ill-defined central fascia, scarcely reaching the dorsum, and the whole apical portion of the wing are also of a somewhat darker shade than the intermediate spaces; cilia cinereous, with a tawny basal line. *Earp. al.* 24-34 mm. *Hindwings* greyish fuscous; cilia shining, greyish white, in which the scales are beautifully and distinctly

divided into several projecting points at their spatulate ends. *Abdomen* greyish fuscous, dirty whitish beneath; anal tuft pale cinereous.

*Type* ♂ (66379); ♀ (66380) *V. de Chiriqui*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66381) US. Nat. Mus.]

*Hab. Central America*—GUATEMALA: SOLOLA: Panajachel, 5000 ft., 30. XII. 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). Three specimens.

The ♀ is larger than the ♂, the colour of the forewings inclining more to chestnut-brown, the hindwings to fawn-ochreous. The underside is somewhat less reticulated than in the ♂ and of a more uniform reddish ochreous colour.

## 12. *Amorbia revolutana*, Z.

*Tortrix* (*Cacoecia*) *revolutana* Z. Hor. Soc. Ent. Ross. 13 89–90 sp. 2 (1877)<sup>1</sup>.

*Type* ♂ Mus. Stgr.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI (*H. Ribbe*)<sup>1</sup>.

## SPARGANOTHIS Hb.

= † *SPARGANOTHRIS* Stph.; = *OENECTRA* Gn. († *ONECTRA* Stgr-Wk.); = *OENOPHTHIRA* Dp.; = *BEGUNNA* Wkr.; = *LEPTORIS* Clms.; = *CENOPIS* Z.

Type 1: *Tortrix pilleriana* S-D. (Meyr. 1895).

SPARGANOTHIS Hb. Verz. Schm. 386–7 sp. 3753–60 (1826). † *SPARGANOTHRIS* Stph. Ill. Br. Ent. Haust. 4 172 (1834), 419 no. 1138 sp. 3753–8 (1835). *OENECTRA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 142 (1845): Eur. Micr. Ind. Meth. 8 (1845). *OENOPHTHIRA* Dp. Cat. Meth. Lp. Eur. 288 no. 7 (1845). *OENECTRA* Stph. List Br. An. BM. 10 Lp. 9–10 no. 7 sp. 1 (1852). *TORTRIX* (K. † *ONECTRA* Gn.) Stgr-Wk. Cat. Lp. Eur. 239 no. 101 K. sp. 752 (1871). *OENECTRA* Frnld. Tr. Am. Ent. Soc. 10 19–20 sp. 88–96 (1882). SPARGANOTHIS Meyr. HB. Br. Lp. 518, 528 no. 6 sp. 1 (1895). *OENOPHTHIRA* Stgr-Rbl. Cat. Lp. Pal. 2 85 no. 223 sp. 1505 (1901). SPARGANOTHIS Frnld. Bull. US. Nat. Mus. 52 477–8 sp. 5345–55 (1902); Krf. Smith's Check List Lp. Bor-Am. 105 sp. 5762–72 (1903); Knl., Splr. Schm. Eur. 2 246 no. 6 sp. 1 Pf. 83·34 (1907); Knl. Zool. 21 (54 Pal. Tortr.) 56 Pf. 1·40–1, 6·38–9 (1908), 117–18 sp. 1 tf. 117·8 (1910); Frnld. Gn. Tortr. 14, 28–9, 39–40, 57 (1908).

[It does not appear to be generally known that Duponchel's Catalogue was published in three parts:—

livr. 1: pp. i–viii + 1–64 (1844).

2: pp. 65–296 (1845).

3: pp. ix–xxx [–xxxi] + 297–523 (1846).

Mr. C. Davies Sherborn has kindly supplied these data.—Drnt.]

Type 2: *Begunna xanthoides* Wkr. (Wkr. 1863).

BEGUNNA Wkr. Cat. Lp. BM. 27 189-90 no. 15 sp. 1 (1863). *LEPTORIS* Clms. Pr. Ent. Soc. Phil. 5 139-40 tf. 139 · 6<sup>a-c</sup> (1865) [Frnld. Gn. Tortr. 39-40 (1908)].

Type 3: *Tortrix pettitana* Rbnsn. (Frnld. 1908.)

CENOPIS Z. Verh. ZB. Ges. Wien 25:1875 Abh. 239-41 sp. 1-2 (1875); Frnld. Tr. Am. Ent. Soc. 10 20-1 sp. 97-103 (1882); Bull. US. Nat. Mus. 52 476 sp. 5335-41 (1902); Krft., Smith's Check List Lp. Bor-Am. 105 sp. 5752-8 (1903); Frnld. Gn. Tortr. 41, 60 (1908).

### 1. *Sparganothis lugens*, sp. n.

*Antennae* cinereous. *Palpi* projecting more than twice the length of the head beyond it; fuscous. *Head* and *Thorax* fuscous. *Forewings* fuscous, with a slight vinous tinge; a basal patch, wider on the dorsum than on the costa, a central fascia, wider on the costa than on the dorsum, and an apical patch, extending to the tornus, are obscurely indicated by lines and mottling of darker fuscous scales; cilia fuscous. *Exp. al.* 20-22 mm. *Hindwings* and cilia brownish fuscous. *Abdomen* fuscous. *Legs* pale cinereous.

Type ♀ (66311); ♂ (66313) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66312) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*). Four specimens.

This very obscure, but apparently undescribed species, is represented by four specimens, of which the ♀ Type alone is in condition to justify a description.

### 2. *Sparganothis morata*, sp. n. (Tab. VII. fig. 13.)

*Antennae* and *Palpi* mouse-colour; the latter acute, projecting twice the length of the head beyond it. *Head* and *Thorax* mouse-colour. *Forewings* mouse-colour, the costa narrowly tinged with ochreous, on which is some greyish fuscous speckling; across the middle of the wing runs a narrow waved line of ferruginous scaling, somewhat broken toward the costa, some small spots before it and several broken lines of spots beyond it, on the apical third of the wing, are of the same colour, but by no means conspicuous; cilia paler than the wings, with a slight ochreous tinge. *Exp. al.* 17 mm. *Hindwings* brownish fuscous; cilia pale greyish. *Abdomen* greyish fuscous. *Legs* pale greyish fuscous.

Type ♀ (66320) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881 (*G. C. Champion*). Unique.

### 3. *Sparganothis amoebaea*, sp. n. (Tab. VII. fig. 12.)

*Antennae* ♂ biciliate  $2\frac{1}{2}$ ; cinereous, blackish about the base. *Palpi* reaching the length of the head beyond it, porrect, divergent; white, the median joint closely clothed above and beneath, the scales on the underside projecting a little beyond the base of the short terminal joint, the basal half smoky brown externally. *Head* rather rough; white. *Thorax* (denuded) apparently white. *Forewings* somewhat narrowed at the base, widening outwardly, the costa arched before the middle, apex obtuse, termen very oblique, tornus pronounced, rounded; cream-white, an elongate black spot at the base of the costa is followed at one-third by a black transverse band, tending obliquely outward, much attenuated, almost broken at the outer third of the fold, and terminating in an elongate, somewhat triangular patch beyond the middle of the dorsum; about half-way between this and the base is a cuneiform dorsal patch of black scaling; on the costa, beyond the band, is a small black median spot, followed by a black triangle broken by a white spot at its middle on the costa; this is followed by two smaller black costal spots

before the apex; a few scattered black scales, accompanied by slight ferruginous shading, are distributed over the outer half of the wing; cilia cream-white, a few scales in the black markings appear to be slightly raised; underside much mottled. *Exp. al.* 15 mm. *Hindwings* broader than the forewings, somewhat trapezoidal, the termen sinuate; pale cinereous, mottled on the outer half with brownish fuscous; cilia pale cinereous, with a brownish fuscous streak running through them on the costa before the apex; underside much mottled. *Abdomen* brownish, anal tuft inclining to ochreous. *Legs* white, the two anterior pairs shaded with brown externally.

*Type* ♂ (66321) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*). Unique.

#### 4. *Sparganothis xanthista*, sp. n.

*Antennae* brown. *Palpi* extending more than the length of head beyond it; pale yellow, tinged with brown externally. *Head* pale yellow; with projecting frontal tuft. *Thorax* yellow, tegulae partly brown. *Forewings* shining, pale golden yellow; a costal spot at the base, an outwardly oblique fascia before the middle, contracted on the cell, a costal spot at one-third from the apex, and a few scattered scales about the apical nervures, brown; cilia scarcely paler than the wings. *Exp. al.* 17 mm. *Hindwings* and cilia shining, ivory-white. *Abdomen* and *Legs* whitish ochreous.

*Type* ♂ (66315) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66316) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

#### 5. *Sparganothis nephela*, sp. n.

*Antennae* ♂ biciliate  $1\frac{1}{2}$ ; ochreous. *Palpi* projecting more than twice the length of the head beyond it, acutely triangular; canary-yellow, with a triangular brown mark on the outer side of the median joint. *Head* with projecting tufts in front; canary-yellow. *Thorax* tawny brown, the tegulae tipped with yellow. *Forewings* shining, pale canary-yellow, reticulated by oblique transverse bands of shining lilac, narrowly margined on both sides with ferruginous; these bands, to the number of six, running in opposite directions, intersect each other mapping out the pale wing-surface into about twelve quadrate, or triangular patches, some of which are sprinkled with lines of small ferruginous scales; cilia shining, pale yellowish. *Exp. al.* 14 mm. *Hindwings* and cilia white. *Abdomen* and *Legs* whitish ochreous.

*Type* ♂ (66317, *V. de Chiriqui*); ♀ (66319, *Bugaba*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66318) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*); Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*). Three specimens.

### Fam. 11. OLETHREUTIDAE.

#### ANCYLIS Hb.

=§ *EPICHARIS* Hb.; =†*ANCHYLOPERA* Stph. (†*ANCYLOPERA* Wlsm.); =*PHOXOPTERIS* Tr. (†*PHOXOPTERYX* Sdf.); =*PHILALCEA* Stph. (§*ANTICLEA* Stph.).

*Type* 1: *Pyralis laetana* F. (Wlsm. 1907).

ANCYLIS Hb. Verz. Schm. 376 sp. 3607–14 (1826); Stph. Ill. Br. Ent. Haust. 4 109 (1834), 418 no. 1109 sp. 3607–14 (1835). *PHOXOPTERIS* Tr. Schm. Eur. 7 232 no. 127 (1829): 8 231–46 no. 128 sp. 1–11 (1830); Crt. Guide Br. Ins. 170 no. 956 sp. 1–12 (1831). § *ANTICLEA* Stph. Ill. Br. Ent. Haust. 4 113–17 no. 287 sp. 1–12 (1834). *PHILALCEA* Stph. Ill. Br. Ent. Haust.



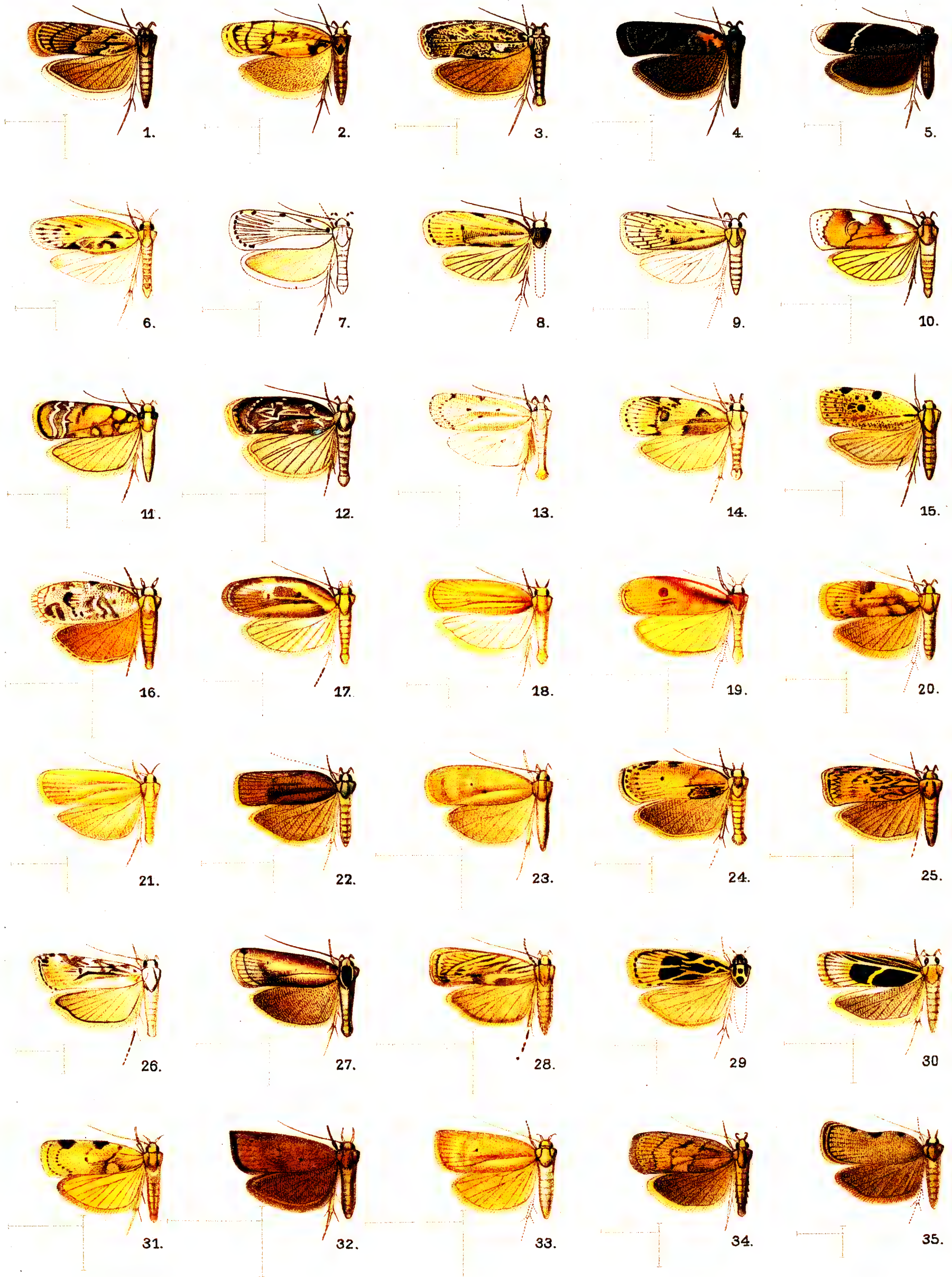
# HETEROCERA.

## TINEINA.

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# BIOLOGIA CENTRALI-AMERICANA.

SUBJECTS COMPLETED, continued.

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THE Editor has been fortunate in obtaining the co-operation of many Zoologists in the Zoological part of this Work. The names of the Authors of the different subjects already finished and in progress will be found on the second and third pages of this wrapper. The remaining subject, so far as at present arranged, has been undertaken as follows:—

**MICRO-LEPIDOPTERA.** By LORD WALSINGHAM.

---

The Editor will prepare, at the conclusion of the Work, an Introductory Volume, wherein the physical features of the country will be described and illustrated with maps.



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Part CCXII. has been issued in two sections:

CCXII. A contains the continuation of the Micro-Lepidoptera, with one Plate (VI.).

CCXII. B contains a further instalment of the same subject, with one Plate (VII.).





4 396 (1835); Crt. Br. Ent. 13 expl. Pl. 583] (1836). *PHOXOPTERYX* Sdf. Bull. Soc. Imp. Nat. Mosc. 10:1837 (6) 93 no. 132 (1837); Stgr-Wk. Cat. Lp. Eur. 262-3 no. 129 sp. 1250-67 (1871). *PHOXOPTERIS* Frnld. Tr. Am. Ent. Soc. 10 48-52 sp. 351-79 (1882). *ANCYLIS* Meyr. HB. Br. Lp. 454, 477-81 no. 12 sp. 1-14 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 126-7 no. 265 sp. 2262-80 (1901); Frnld. Bull. US. Nat. Nus. 52 466-8 sp. 5239-67 (1902); Krft., Smith's Check-List Lp. Bor-Am. 103-4 sp. 5654-82 (1903); Wlsm. Ent. Mo. Mag. 43 150-1 (1907); Frnld. Gn. Tortr. 6, 20, 27, 56 (1908); Knl., Splr. Schm. Eur. 2 269-71 no. 5 sp. 1-18 Pf. 85:31-9 (1907); Meyr. Pr. Linn. Soc. NSW. 36 225, 243-4 no. 53 sp. 340 (1911).

Type 2: *Tortrix derasana* Hb. (Frnld. 1908).

§ *EPICHARIS* Hb. Verz. Schm. 376 sp. 3615-6 (1826); Stph. Ill. Br. Ent. Haust. 4 418 no. 1110 sp. 3615-6 (1835); Frnld. Gn. Tortr. 7, 58 (1908).

[§ *Epicharis* Hb is homonymous with *EPICHARIS* Klug (1807) *Hymenopt.*]

Type 3: *Pyralis lundana* F. (Crt. 1831).

*ANCYLOPERA* Stph. (†Wlsm.) = †*ANCHYLOPERA* Stph. Cat. Br. Ins. 2 177-8 no. 256 sp. 6950-60 (1829); Crt. Br. Ent. 8 expl. Pl. 376 (1831); Stph. Ill. Br. Ent. Haust. 4 109-13 no. 286 sp. 1-12 (1834). *ANCYLOPERA* Wlsm. Ent. Mo. Mag. 43 151 (1907). *ANCHYLOPERA* Frnld. Gn. Tortr. 7, 23, 58 (1908).

Type 4: *Tortrix siculana* Hb. (Dp. 1834).

\**PHOXOPTERIS* (Tr.) Dp. Ann. Soc. Ent. Fr. 3 446-7 no. 14 (1834): HN. Lp. Fr. 9 22 no. 14 (1834), 329-47 sp. 1244-52 Pf. 252:6-253:5 (1835).

# 1. *Ancylis nomica*, sp. n.

*Antennae* pale fawn-grey. *Palpi* white on their inner sides, fawn-grey externally, the terminal joint tipped with fuscous. *Head* fawn-ochreous. *Thorax* fawn-grey. *Forewings* fawn-grey, blending with fawn-brown beyond the middle and beneath the fold; along the costa is a series of about six, oblique, shining white, geminated streaklets, with a small cuneiform white streak before the apex, followed by a fuscous spot at its lower extremity, near the deep incision of the termen—the space from this spot to the apex is chestnut-brown, margined by white cilia above and beneath; above the tornus the fawn-grey space contains some wavy shining lines, which clearly define the oblique outer edge of the fawn-brown shade above it; cilia, below the incision, pale fawn-grey, with a shining line along their base. *Exp. al.* 11-15 mm. *Hindwings* pale greyish fuscous; cilia shining, pale grey, a slight shade running through them near their base. *Abdomen* shining, greyish. *Legs* nearly white, with faint greyish tarsal bands.

Type ♂ (66487) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66488) US. Nat. Mus.]

*Hab.* Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*). Three specimens.

This is a true *Ancylis* with HW: 3-4 stalked—perhaps most nearly allied to *5259 uncana* Hb.

## EUCOSMA Hb.

=*EPIBLEMA* Hb.; =§*ASTATIA* Hb.; =*EPINOTIA* Hb.; =*EVETRIA* Hb.; =*NOTOCELIA* Hb.; =*EPISAGMA* Hb.; =*ACALLA* Hb.; =*THIODIA* Hb.; =*SPILONOTA* Stph.; =*STEGANOPTYCHA* Stph. (†*STEGANOPTERA* HS.); =*POECILOCHROMA* Stph.; =§*ASPIS* Tr.; =*COCCYX* Tr.; =*PAEDISCA* Tr. (†*POEDISCA* Gn.); =*ASPIDIA* Dp.; =§*STROBILA* Sdf.; =*PARAGRAPHIA* Sdf.; =*PARDIA* Gn.; =*CARTELLA* Gn. (†*CURTELLA* Stn.); =*PHLAEODES* Gn. (†*PHLOEODES* South); =§*CATOPTRIA* Gn.; =*CROCIDOSEMA* Z. (†*CROCIDOSOMA* Wkr.); =*LITHOGRAPHIA* Stph.; =*HALONOTA* Stph.; =*CACOCHROEA* Ldr. (†*CACOCHROA* Stgr-Wk.); =*PELOCHRISTA* Ldr.; =*TMETOCERA* Ldr.; =*MONOSPHRAGIS* Clms. (†*MONOSPRAGIS* Frnld.); =*IOPLOCAMA* Clms. (*JOPLOCAMA* Wkr.); =*APFA* Wkr.; =*EURYPTYCHIA* Clms.; =*CALLIMOSEMA* Clms.; =§*MONILIA* Wkr.; =*STREPSICRATES* Meyr. (§*STREPSICEROS* Meyr.); =*PROTITHONA* Meyr.; =*PARIENIA* Berg (§*EXORIA* Meyr.); =\**CYDIA* (Hb.) Meyr.; =*PTHINOLOPHUS* Dyar (†*PTHENOLOPHUS* Busck).

Type 1: *Eucosma circulana* Hb. (Hb. 1823).

*EUCOSMA* Hb. Ztr. Smlg. Exot. Schm. 2 28, [35] sp. 182 Pf. [63] 363-4 (1823): Verz. Schm. 374 sp. 3585-6 (1826); Wkr. Cat. Lp. BM. 28 423 sp. 1-2 (1863). *CALLIMOSEMA* Clms. Pr. Ent. Soc. Phil. 5 141-2 ff. 141·9<sup>a</sup> (1865). *EUCOSMA* Wlsm. Pr. Z. Soc. Lond. 1897 126-7 no. 64 sp. 172-3 (1897): Ann-Mag. NH. (7 s.) 6 336-41 (1900); Frnld. Bull. US. Nat. Mus. 52 455-60 sp. 5079-5162 (1902); Dyar Pr. Ent. Soc. Wash. 5 179-80, 228-9 (1903); Krft., Smith's Check-List Lp. Bor-Am. 101-2 sp. 5482-5572 (1903): Pr. US. Nat. Mus. 28 350-9 (1905): Can. Ent. 37 44, 208-9 (1905): Bull. Am. Mus. NH. 23 157 (1907): Tr. Am. Ent. Soc. 33 17-37, 87-92 (1907): Can. Ent. 39 53-7, 77-80, 153-4 (1907): Jr. NY. Ent. Soc. 16 167-73 (1908); Frnld. Gn. Tortr. 4, 5, 6, 7, 8-9, 18-19, 23, 24, 29, 31, 35, 37-8, 39, 40, 54-5 (1908); Wlsm. Ent. Mo. Mag. 46 257 (1910); Meyr. Jr. Bomb. NH. Soc. 19 607 (1909): 21 864-9 (1912): Pr. Linn. Soc. NSW. 36 225, 245-50 no. 55 sp. 342-51 (1911): Tr. NZ. Inst. 43:1910 88 no. 16 sp. 81-3 (1911): Ent. Mo. Mag. 48 34, 35, 36 (1912).

Type 2: *Phalaena Tinea foenella* L. (Stph. 1834).

*EPIBLEMA* Hb. Verz. Schm. 375-6 sp. 2595-3606 (1826). *SPILONOTA* Stph. (B. a. *EPIBLEMA* Hb.) Stph. Ill. Br. Ent. Haust. 4 92-3 no. 281 sp. 6 (1834), 418 no. 1108 sp. 3595-3606 (1835). *EPIBLEMA* Meyr. HB. Br. Lp. 454, 490-9 no. 17 sp. 1-29 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 115-20, 262-3 no. 260 sp. 2067-2154 (1901); Knl., Splr. Schm. Eur. 2 280-6 no. 23 sp. 1-71 Pf. 86 15-46 (1907); Frnld. Gn. Tortr. 6, 54 (1908).

Type 3: *Tortrix similana* Hb. (= *straemiana* F.; Stph. 1834).

*EPINOTIA* Hb. Verz. Schm. 377 sp. 3619-26 (1826). *SPILONOTA* Stph. (B. b. *EPINOTIA* Hb.) Stph. Ill. Br. Ent. Haust. 4 93-6 no. 281 sp. 7-17 (1834), 418 no. 1112 sp. 3619-25 (1835). *HALONOTA* Stph. (a. *EPINOTIA* Hb.) Stph. List Br. An. BM. 10 Lp. 45, 91 no. 32 sp. 1-2 (1852). *EPINOTIA* Frnld. Gn. Tortr. 8, 54 (1908). [nec \**POECILOCHROMA* Stph. (C. *EPINOTIA* Hb.) Stph. Ill. Br. Ent. Haust. 4 139-41 no. 295 sp. 3-5 (1834)—*corticana* Hb. (= *communana* Stph.).] *HALONOTA* Stph. List Br. An. BM. 10 Lp. 45-8 no. 32 sp. 1-13 (1852); Stn. Mn. Br. B. & M. 2 201, 211-13 no. 11 (1858), 460 sp. 1002-10 (1859); Wilk. Br. Tortr. 53, 93-102 no. 11 sp. 1-9 Pf. 1·7, 3·8 (1859); Frnld. Gn. Tortr. 35, 55 (1908)—Type *similana* Hb. (Frnld. 1908).

Type 4: *Phalaena Tortrix uddmanniana* L. (Stph. 1834)

NOTOCELIA Hb. Verz. Schm. 379-80 sp. 3652-7 (1826); Stph. Ill. Br. Ent. Haust. 4 137-8 no. 294 sp. 1 (1834), 419 no. 1118 sp. 3652-7 (1835). *ASPIDIA* Dp. = § *ASPIS* Tr. Schm. Eur. 7 231 no. 123 (1829): 8 156-9 no. 123 sp. 1 (1830). *ASPIDIA* Dp. Ann. Soc. Ent. Fr. 3 444 no. 7 (1834): HN. Lp. Fr. 9 20 no. 7 (1834), 176-83 no. 7 sp. 1180-1 Pf. 245·1-2 (1835). *ASPIS* Stgr-Wk. Cat. Lp. Eur. 250 no. 115 sp. 1004-5 (1871). NOTOCELIA Meyr. HB. Br. Lp. 454, 488-90 no. 15 sp. 1-6 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 115 no. 258 sp. 2055-65 (1901).

Type 5: *Phalaena Tortrix solandriana* L. (Stph. 1834; Dp. 1834).

EPISAGMA Hb. Verz. Schm. 383 sp. 3703-4 (1826). POECILOCHROMA Stph. (A. EPISAGMA Hb.) Stph. Ill. Br. Ent. Haust. 4 139 no. 295 sp. 1 (1834), 419 no. 1128 sp. 3703-4 (1835). § *ASTATIA* Hb. Verz. Schm. 377 sp. 3617-18 (1826). POECILOCHROMA Stph. (B. [*dele* †*EPIBLEMA*=] *ASTATIA* Hb.) Stph. Ill. Br. Ent. Haust. 4 139 sp. 2 (*vide errata* 436), 418 no. 1111 sp. 3617 (1835). *ASTATIA* Frnld. Gn. Tortr. 7, 54 (1908)—Type: *solandriana* L. (*trapezana* F.; Stph. 1835).

*Astatia* Hb. is too close to *ASTATA* Ltr. (1796) *Hym.*, and should be sunk as a synonym of *Episagma* Hb., with which it is Cotypical; moreover, the Type of *Episagma* became fixed in 1834, while, through being erroneously recorded as "*Epiblema*," the Type of *Astatia* did not become fixed until the publication of Stephens' Appendix and errata in 1835.

[*nec* \**LOZOTAENIA* Stph. (B. f. *EPISAGMA*? Hb.) Stph. Ill. Br. Ent. 4 81 no. 277 sp. 28 (1834)—Stephens described the North American species 5379 *Archips trileucana* Stph. (= *persicana* Fitch) under the name "*Episagma? schreberiana?*" which did not affect the genus *Episagma* Hb.]

[*nec* \**DITULA* Stph. (A. a. *ASTATIA* Hb.) Stph. Ill. Br. Ent. Haust. 4 83-4 sp. 1-3 (1834), 418 no. 1111 sp. 3617 (1835)—*sylvana* Stph. = *Olethreutes profundana* F.]

[*nec* \**POECILOCHROMA* Stph. (e. *EPISAGMA* Hb.) Stph. List Br. An. BM. 10 Lp. 91 no. 31 sp. 11 (1852)—"*Poecilochroma? schreberiana?*" = *Olethreutes dimidiana* Cl. (*schreberiana* L.). *EPISAGMA* Frnld. Gn. Tortr. 11-12, 56 (1908).]

*POECILOCHROMA* Stph. Cat. Br. Ins. 2 183 no. 266 sp. 7024-30 (1829): Ill. Br. Ent. Haust. 4 138-41 no. 295 sp. 1-7 Pf. 36·1 (1834); Wstwd. Syn. Gn. Br. Ins. 108 (1840); Frnld. Gn. Tortr. 24, 55 (1908)—Type: *solandriana* L. (Wstwd. 1840).

*PAEDISCA* Tr. Schm. Eur. 8 188-202 no. 126 sp. 1-9 (1830); Dp. Ann. Soc. Ent. Fr. 3 447 no. 15 (1834): HN. Lp. Fr. 9 22-3 no. 15 (1834), 348-76 no. 15 sp. 1253-63 Pf. 253·6-255·5 (1835). *PARAGRAPHIA* Sdf. nn. (= *PAEDISCA* Tr.) Sdf. Bull. Soc. Imp. Nat. Mosc. 10: 1837 92, 97, 128 no. 130 (1837). †*POEDISCA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 174-5 (1845): Eur. Micr. Ind. Meth. 40-1 (1845). § *GRAPHOLITHA* Tr. (B. *PAEDISCA* Ldr.) Stgr-Wk. Cat. Lp. Eur. 252-5 no. 123 B. sp. 1032-1107 (1871). *PAEDISCA* Frnld. Tr. Am. Ent. Soc. 10 36-42 sp. 230-90 (1882): Gn. Tortr. 21, 55 (1908)—Type: *solandriana* L. (Dp. 1834).

[*nec* \**PAEDISCA* Crt. Br. Ent. 12 expl. Pl. 571 (1835—*profundana* Schiff. (*Olethreutes* Hb.).]

Type 6: *Tortrix ophthalmicana* Hb. (Stph. 1834).

ACALLA Hb. Verz. Schm. 383 sp. 3705-8 (1826). POECILOCHROMA Stph. (D. ACALLA Hb.) Stph. Ill. Br. Ent. Haust. 4 141 no. 295 sp. 6 (1834), 419 no. 1129 sp. 3705-8 (1835). ACALLA Frnld. Gn. Tortr. 12, 55 (1908).

[*nec* \**PERONEA* Crt. (c. *ACALLA* Hb.) Stph. List. Br. An. BM. 10 Lp. 17 no. 10 sp. 6 (1852). *ACALLA* Meyr. HB. Br. Lp. 518, 519-26 no. 2 sp. 1-24 tf. 519 (1895)—*lipsiana* Schiff.]

Type 7: *Phaleana Tinea tedella* Cl. (= *comitana* Stph.; Stph. 1834).

*EVETRIA* Hb. Verz. Schm. 378-9 sp. 3640-4 (1826). *ORTHOTAENIA* Crt. (B. *EVETRIA* Hb.) Stph. Ill. Br. Ent. Haust. 4 179-80 no. 308 sp. 4-6 (1834), 418-9 no. 1115 sp. 3460-3 (1835). [Stephens removed *schulziana* F. (= *bentleyana* Stph.) to A. *RHYACIONIA* Hb., and, as \**resinella* (*nec* L.) Stph. = *pinivorana* Z., the only original species enumerated is *tedella* Cl. = *comitana* Schiff., Stph.)—this should be regarded as the Type.] *Coccyx* Tr. (c. *EVETRIA* Hb.) Stph. List Br. An. BM. 10 Lp. 51 no. 35 sp. 7-10 (1852)—*tedella* Cl. (= *hyrciniana* Uslar, Stph.). *EVETRIA* Frnld. Gn. Tortr. 8-9, 54 (1908). *Coccyx* Tr. Schm. Eur. 7 230 no. 121 (1829): 8 126-41 no. 121 (+122) sp. 1-10 (1830); Eversm. Enum. Lp. Volg-Ural. 19 (1834); Dp. HN. Lp. Fr. 9 231-45 no. 10 sp. 1201-7 Pf. 247.4-248.1 (1835). § *STROBILA* Sdf. nn. (= *Coccyx* Tr.) Sdf. Bull. Soc. Imp. Nat. Mosc. 10:1837 92 no. 124, 97, 128 no. 125 (1837). *Coccyx* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 179-80 no. 11 (1845): Eur. Micr. Ind. Meth. 45-6 (1845); Frnld. Gn. Tortr. 18-19, 28, 55 (1908)—Type: *tedella* Cl. (Eversm. 1834; Gn. 1845). [*nec* \**Coccyx* Dp. Ann. Soc. Ent. Fr. 3 445 no. 10 (1834): HN. Lp. Fr. 9 21 (1834)—*turionella* L. (*Rhyacionia* Hb.).] [§ *Strobila* Sdf. is homonymous with *STROBILA* Sars (1835) *Medusae*.]

Type 8: *Tortrix citrana* Hb. (Stph. 1852).

*THIODIA* Hb. Verz. Schm. 391 sp. 3804-5 (1826); Stph. List Br. An. BM. 10 Lp. 63 no. 46 sp. 1 (1852); Wlsm. Pr. Z. Soc. Lond. 1897 125-6 no. 63 sp. 171 (1897): Ann-Mag. NH. (7 s.) 6 404-7 sp. 1110-1219 (1900); Frnld. Bull. US. Nat. Mus. 52 460-3 sp. 5163-5205 (1902); Dyar Pr. Ent. Soc. Wash. 5 229-30 (1903); Krft. Can. Ent. 37 44-8, 209, 253 (1905): Pr. US. Nat. Mus. 28 359 (1905): Can. Ent. 39 57-8 (1907): Tr. Am. Ent. Soc. 33 37-45, 92 (1907); Meyr. Ent. Mo. Mg. 48 34, 35 (1912); Wlsm. Pr. Z. Soc. Lond. 1907 1004-5 no. 67 sp. 133 Pf. 53.2 (1908); Frnld. Gn. Tortr. 16, 56 (1908).

Type 9: *Tortrix ocellana* S-D., F. (= *comitana* Hb.; Crt. 1835).

*SPILONOTA* Stph. Cat. Br. Ins. 2 173-4 no. 252 sp. 6900-14 (1829); Crt. Guide Br. Ins. 167-8 no. 950 sp. 1-25 (1831); Stph. Ill. Br. Ent. Haust. 4 90-6 no. 281 sp. 1-17 Pf. 37.3 (1834); Crt. Br. Ent. 12 expl. Pl. 551 (1835); Wstwd. & Humph. Br. Moths 2 119-22 sp. 1-17 Pf. 82.1-19 (1844); Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 154-5 no. 1 (1845): Eur. Micr. Ind. Meth. 20-1 no. 1 (1845); Stph. List Br. An. BM. 10 Lp. 30-2 no. 23 sp. 1-10 (1852). *TMETOCERA* Ldr. Wien. Ent. Mts. 3 124, 367-8 no. 22 (1859); Stgr-Wk. Cat. Lp. Eur. 104 no. 80 sp. 1103 (1861); Wkr. Cat. Lp. BM. 27 280 no. 37 sp. 1 (1863). § *GRAPHOLITHA* Tr. (*TMETOCERA* Ldr.) Hnmn. Schm. Deutsch. Tortr. 100, 206 no. 302 P. a. sp. 371 (1863). *TMETOCERA* Stgr-Wk. Cat. Lp. Eur. 260 no. 127 sp. 1210 (1871); Frnld. Tr. Am. Ent. Soc. 10 48 sp. 349 (1882); Meyr. HB. Br. Lp. 454, 476 no. 10 sp. 1 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 125 no. 263 sp. 2255-6 (1901); Frnld. Bull. US. Nat. Mus. 52 466 sp. 5237 (1902); Knl., Splr. Schm. Eur. 2 279 no. 19 Pf. 86.6 (1907); Frnld. Gn. Tortr. 38, 58 (1908)—Type *ocellana* S-D. (Ldr. 1859). *SPILONOTA* Frnld. Gn. Tortr. 22, 38, 58 (1908); Meyr. Pr. Linn. Soc. NSW. 36 224, 227-34 no. 51 sp. 295-314 (1911): Tr. NZ. Inst. 43:1910 87-8 no. 15 sp. 74-80 (1911).



[*nec* \**SPILONOTA* Wstwd. Syn. Gn. Br. Ins. 107 (1840)—*tripunctana* S-D., F. (= *cynosbatella* Stph., Wstwd.) (*Eucosma* Hb.).]

[*nec* \**ANTITHESIA* Stph. (*SPILONOTA* Stph.) Stph. List Br. An. BM. 10 Lp. 29 no. 20 c. sp. 15 (1852)—*carbonana* Dbld. (= \**ustulana* Hw., Stph.) (*Olethreutes* Hb.).]

[*nec* \**SPILONOTA* Stn. Mn. Br. B. & M. 2 201, 205-6 (1858), 459 no. 6 sp. 980-3 (1859); Wilk. Br. Tortr. 53, 71-5 no. 6 sp. 1-4 (1859)—*roborana* S-D., Tr. (*Eucosma* Hb.).]

Type 10: *Tinea nisella* Cl. (Wstwd. 1840).

STEGANOPTYCHA Stph. Cat. Br. Ins. 2 176-7 no. 255 sp. 6940-9 (1829); Crt. Guide Br. Ins. 169 no. 954 sp. 1-14 (1831); Stph. Ill. Br. Ent. Haust. 4 105-9 no. 284 sp. 1-12 (1834); Wstwd. Syn. Gn. Br. Ins. 107 (1840); Westwd. & Humph. Br. Moths 2 127-9 sp. 1-12 Pf. 84 1-12 (1844). †*STEGANOPTERA* HS. SB. Schm. Eur. 4 133 no. 31 (1851). *STEGANOPTYCHA* HS. SB. Schm. Eur. 4 278-83 no. 31 sp. 436-53 Pf. 18 128, 20 140-2, 24 174-7, 26 185, 37 269, 38 275, 43 303, 45 320, 54 383 (1851); Wlsm. Ent. Mo. Mag. 31 43 (1895); Tr. Ent. Soc. Lond. 1895 515-6 (1895); Frnld. Gn. Tortr. 23, 55 (1908).

\**GRAPHOLITHA* (Tr.) Dp. Ann. Soc. Ent. Fr. 3: 1834 446 no. 12 (1834): HN. Lp. Fr. 9 22 no. 12 (1834), 263-303 no. 12 sp. 1214-31 Pf. 249 1-251 2 (1835): Cat. Meth. Lp-Eur. 304-6 no. 24 (1845)—*nisella* Cl. (= *petrana* Dp.)

*LITHOGRAPHIA* Stph. List. Br. An. BM. 10 Lp. 32-5 no. 24 sp. 1-12 (1852); Stn. Mn. Br. B. & M. 2 201, 206-7 (1858), 459 no. 7 sp. 984-7 (1859); Wilk. Br. Tortr. 53, 75-9, no. 7 sp. 1-4 (1859); Frnld. Gn. Tortr. 35, 55 (1908)—Type: *nisella* Cl. (Frnld. 1908).

[*nec* \**STEGANOPTYCHA* (Stph.) Wilk. Br. Tortr. 115, 127-31 no. 2 sp. 1-3 (1859)—*naevana* Hb. (*Rhopobota* Ldr.).]

[*nec* \**STEGANOPTYCHA* Stgr-Wk. Cat. Lp. Eur. 260-2 no. 128 sp. 1211-49 (1871); Frnld. Tr. Am. Ent. Soc. 10 46-8 sp. 337-48 (1882); Stgr-Rbl. Cat. Lp. Pal. 2 110-12 no. 249 sp. 1969-2007 (1901).]

Type 11: *Tortrix tripunctana* S-D., F. (Gn. 1845).

PARDIA Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 155 no. 2 (1845): Eur. Micr. Ind. Meth. 21 no. 2 (1845); Stph. List. Br. An. BM. 10 Lp. 29-30 no. 22 sp. 1 (1852); Stn. Mn. Br. B. & M. 2 201, 205 (1858), 459 no. 5 sp. 979 (1859); Wilk. Br. Tortr. 53, 69-71 no. 5 sp. 1 (1859); Frnld. Gn. Tortr. 29, 55 (1908).

Type 12: *Tortrix bilunana* Hw. (= *cretaceana* Fröl.; Gn. 1845).

†*POEDISCA* Tr. (CARTELLA Gn.) Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 174 no. 7† (1845): Eur. Micr. Ind. Meth. 40 no. 7† (1845). CARTELLA Stph. List. Br. An. BM. 10 Lp. 40 no. 28 sp. 1 (1852). †*CURTELLA* Stn. Mn. Br. B. & M. 2 201 no. 15 (1858). CARTELLA Stn. Mn. Br. B. & M. 2 216-7 (1858), 460 no. 15 sp. 1024 (1859); Wilk. Br. Tortr. 53, 113-5 no. 15 sp. 1 (1859); Frnld. Gn. Tortr. 35, 55 (1908).

Type 13: *Tortrix tetraquetra* Hw. (Frnld. 1908).

PHLAEODES Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 172-3 no. 4 (1845): Eur. Micr. Ind. Meth. 38-9 (1845); Stph. List. Br. An. BM. 10 Lp. 36 no. 25 sp. 1-4 (1852); Stn. Mn. Br. B. & M. 2 201, 207-8 (1858), 459 no. 8 sp. 988-91 (1859); Wilk. Br. Tortr. 53, 80-4 no. 8 sp. 1-4 Pf. 1 5 (1859). †*PHLOEODES* South Ent. Syst. List Br. Lp. 25 (1884). PHLAEODES Frnld. Gn. Tortr. 31, 55 (1908).

Type 14: *Tortrix cana* Hw. (Frnld. 1908).

§ *CATOPTRIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 187-90 no. 20 (1845); Eur. Micr. Ind. Meth. 53-6 no. 20 (1845); Dbld. Syn. List Br. Lp. 26 (1849); Stn. Mn. Br. B. & M. 2 201, 209-10 (1858), 460 no. 10 sp. 996-1001 (1859); Wilk. Br. Tortr. 53, 88-92 no. 10 sp. 1-6 (1859); South Ent. Syn. List Br. Lp. 27 (1884); Frnld. Gn. Tortr. 33, 55 (1908). [*Catoptria* Gn. is homonymous with *CATOPTRIA* Hb. (1826) *Lep.*]

Type 15: *Crocidosema plebeiana* Z. (Z. 1847).

*CROCIDOSEMA* Z. Isis 40: 1847 721-2 (1847); Hdnrch. Lp. Eur. Cat. Meth. 68 no. 11 sp. 313 (1851); Ldr. Wien. Ent. Mts. 3 124, 367 no. 21 (1859); Stgr-Wk. Cat. Lp. Eur. 104 no. 79 sp. 1102 (1861). † *CROCIDOSOMA* Wkr. Cat. Lp. BM. 27 279-80 no. 36 sp. 1 (1863). *CROCIDOSEMA* Stgr-Wk. Cat. Lp. Eur. 263 no. 131 sp. 1269 (1871); Meyr. Pr. Linn. Soc. NSW. 6 635, 659-60 no. 12 sp. 1 (1881); Wlsm. Pr. Z. Soc. Lond. 1891 506, 544 no. 22 sp. 41 (1892); 1897 127 no. 65 sp. 174 (1897); Ann-Mag. NH. (7 s.) 6 441-2 no. 1269 (1900); Stgr-Rbl. Cat. Lp. Pal. 2 110 no. 248 sp. 1968 (1901); Wlsm. Fn. Haw. 1 675-6, 736, 752 no. 38 sp. 366 (1907); Pr. Z. Soc. Lond. 1907 1002-3 no. 65 sp. 131 (1908); Frnld. Gn. Tortr. 34, 59 (1908); Busck. Pr. Ent. Soc. Wash. 12 132-3 (1910).

Type 16: *Paedisca grandaevana* Z. (Ldr. 1859).

*GRAPHOLITHA* Tr. (*CACOCYROEA* Ldr.) Ldr. Wien. Ent. Mts. 3 331, 337 no. 19 A. a. β. (1859); Hnmn. Schm. Deutsch. Tortr. 141-2 no. 302 I. a. sp. 252 (1863). *GRAPHOLITHA* Tr. († *CACOCYROEA* Ldr.) Stgr-Wk. Cat. Lp. Eur. 252 no. 123 A. sp. 1031 (1871). *CACOCYROEA* Frnld. Gn. Tortr. 37, 55 (1908).

Type 17: *Paedisca mancipiana* Mn (Ldr. 1859).

*GRAPHOLITHA* Tr. (*PELOCHRISTA* Ldr.) Ldr. Wien. Ent. Mts. 3 331, 337 no. 19 B. Pf. 2·7 (1859); Stgr-Wk. Cat. Lp. Eur. 102 no. 75 b. sp. 964-6 (1861). *PELOCHRISTA* Wkr. Cat. Lp. BM. 27 261-2 no. 33 sp. 1-3 (1863). *GRAPHOLITHA* Tr. (*PELOCHRISTA* Ldr.) Stgr. Wk. Cat. Lp. Eur. 255 no. 123 C. sp. 1108-10 (1871)—Frnld. Gn. Tortr. 37-8, 55 (1908).

Type 18: *Monosphragis otiosana* Clms. (Clms. 1860).

*MONOSPHRAGIS* Clms. Pr. Ac. Nat-Sc. Phil. 12 354 (1860); Wkr. Cat. Lp. BM. 30 993 (1864); Frnld. Gn. Tortr. 39, [† *MONOSPFRAGIS*] 55 (1908).

Type 19: *Ioplocama formosana* Clms. (Clms. 1860).

*IOPLOCAMA* Clms. Pr. Ac. Nat-Sc. Phil. 12 360 (1860). *IOPLOCAMA* Wkr. Cat. Lp. BM. 30 994 (1864). *IOPLOCAMA* Clms. Pr. Ent. Soc. Phil. 5 141-2 tf. 141·10 (1865); Frnld. Gn. Tortr. 39, 56 (1908).

Type 20: *Affa bipunctella* Wkr. (Wkr. 1863).

*AFFA* Wkr. Cat. Lp. BM. 27 202 no. 30 sp. 1 (1863); Frnld. Gn. Tortr. 40, 55 (1908).

Type 21: *Euryptychia saligneana* Clms. (Clms. 1865).

*EURYPTYCHIA* Clms. Pr. Ent. Soc. Phil. 5 140-1 tf. 141·8 (1865); Frnld. Gn. Tortr. 40, 55 (1908).

[5139 *Eucosma scudderiana* Clms.—*Hedya scudderiana* Clms. (? = *Eurpytychia saligneana* Clms.).]

Type 22: *Monilia semicanella* Wkr. (Wkr. 1866).

§ *MONILIA* Wkr. Cat. Lp. BM. 35 1741 (1866); [Meyr. Pr. Lin. Soc. NSW. 36 227 (1911)].  
[§ *Monilia* Wkr. is too close to *MONILEA* Swains. (1840) *Moll.*]

Type 23: *Sciaphila ejectana* Wkr. (Frnld. 1908).

STREPSICRATES Meyr. = § *STREPSICEROS* Meyr. Pr. Linn. Soc. NSW. 6 635, 678-91 no. 16 sp. 1-11 (1881): NZ. Jr. Sc. 1 278 (1882): Tr. NZ. Inst. 15:1882 58, 62-4 no. 17 sp. 33-4 (1883).  
STREPSICRATES (nn.) Meyr. Tr. NZ. Inst. 20:1887 73-4 (1888); Wlsm. Pr. Z. Soc. Lond. 1891 506-7, 544 no. 23 sp. 42 (1892): 1897 127-8 no. 66 sp. 175 (1897); Meyr. Tr. Ent. Soc. Lond. 1901 571 (1901): 1905 232-3 (1905); Wlsm. Pr. Z. Soc. Lond. 1907 1003-4 no. 66 sp. 132 (1908). § *STREPSICEROS* Lwr. Tr-Pr. Roy. Soc. S. Austral. 32 323-4 (1908); Frnld. Gn. Tortr. 44, 61 (1908). STREPSICRATES Frnld. Gn. Tortr. 45, 61 (1908); Meyr. Tr. NZ. Inst. 41:1908 10-11 (1909).  
[§ *Strepsiceros* Meyr. is homonymous with *STREPSICEROS* H. Smith (1827) *Mamm.*]

Type 24: *Protithona fugitivana* Meyr. (Meyr. 1882).

PROTITHONA Meyr. NZ. Jr. Sc. 1 278 (XI. 1882): Tr. NZ. Inst. 15:1882 58, 62 no. 16 sp. 32 (V. 1883): Tr. Ent. Soc. Lond. 1901 578 (1901); Frnld. Gn. Tortr. 44, 61 (1908); Meyr. Tr. NZ. Inst. 43:1910 88 no. 16 (1911).

Type 25: *Exoria mochlophorana* Meyr. (Meyr. 1882; Berg. 1899).

PARIENIA Berg. = § *EXORIA* Meyr. NZ. Jr. Sc. 1 278 (XI. 1882): Tr. NZ. Inst. 15:1882 58, 65-6 no. 19 sp. 36 (V. 1883). PARIENIA Berg. (nn.) Com. Mus. Buenos Aires 1 78 (1899).  
*EXORIA* Frnld. Gn. Tortr. 44, 46, 61 (1908). PARIENIA (= § *EXORIA* Meyr.) Frnld. Gn. Tortr. 44, 46, 61 (1908); Meyr. Tr. NZ. Inst. 43:1910 88 no. 16 (1911).  
[§ *Exoria* Meyr. is homonymous with *EXORIA* Hb. (1826) *Lep.*]

Type 26: *Tortrix aspidiscana* Hb. (Meyr. 1895; Frnld. 1908).

\* *CYDIA* Hb. ([p.] Verz. Schm. 375 sp. 3593). \* *GRAPHOLITHA* Tr. (b. *CYDIA* Hb.) Stph. List Br. An. BM. 10 Lp. 93 no. 45. b. sp. 1<sup>b</sup> (1852). \* *CYDIA* (Hb.) Meyr. HB. Br. Lp. 454, 482-8 no. 14 sp. 1-18 (1895); Krft., Smith's Check-List Lp. Bor-Am. 102-3 sp. 5573-5617 (1903): Can. Ent. 36 109-12 (1904): Tr. Am. Ent. Soc. 33 54-6, 93 (1907): Jr. NY. Ent. Soc. 16 173 (1908); Meyr. Ent. Mo. Mag. 48 34, 35 (1912); Frnld. Gn. Tortr. 6, 56 (1908).  
[*nec CYDIA* Hb., Stph.—Type: *pomonella* L. (Stph. 1834)—Wlsm. Pr. Z. Soc. Lond. 1897 130 no. 69 (1897).]

Type 27: *Phthinolophus indentanus* Dyar (Dyar 1903).

PHTHINOLOPHUS Dyar Pr. Ent. Soc. Wash. 5 307 (1903); Frnld. Gn. Tortr. 48, 63 (1908).  
CROCIDOSEMA Z. (= † *PHTHENOLOPHUS* Dyar) Busck Pr. Ent. Soc. Wash. 12 132-3 (1910).

## 1. *Eucosma plebeiana* Z.

= *altheana* Mn.<sup>8</sup>; = *lavaterana* Mill.<sup>8</sup>; = *peregrinana* Mschlr.<sup>8</sup>; = *obscura* E. Wltn.<sup>12</sup>; = *blackburnii* Btlr.<sup>11</sup>.

*Crocidosema plebejana* Z. Isis 40:1847 721-2 (1847)<sup>1</sup>. *Penthina altheana* Mn. Verh. ZB. Ver. Wien 5:1855 Abh. 555-6 (1855)<sup>2</sup>. *Paedisca lavaterana* Mill. Ic. 1 290-3 Pf. 34·9-13 (1863)<sup>3</sup>.  
*Grapholitha peregrinana* Mschlr. Berl. Ent. Zts. 10 139-40 (1866)<sup>4</sup>. *Steganoptycha obscura*

E. Wlsth. Ann-Mag. NH. (5 s.) 3 341 (1879)<sup>5</sup>. *Proteopteryx blackburnii* Btlr. Ann-Mag. NH. (5 s.) 7 393-4 sp. 26 (1881)<sup>6</sup>. *Crocidosema plebejana* Stgr-Wk. Cat. Lp. Eur. 263 sp. 1269 (1871)<sup>7</sup>; Stgr-Rbl. Cat. Lp. Pal. 2 110 sp. 1968 (1901)<sup>8</sup>. *Crocidosema plebeiana* Meyr. Pr. Lin. Soc. NSW. 6 659-60 sp. 1 (1881)<sup>9</sup>; Wlsm. Pr. Z. Soc. Lond. 1897 127 sp. 174 (1897)<sup>10</sup>; Fn. Haw. 1 675-6, 736, 752 sp. 366 Pf. 10·15 (1907)<sup>11</sup>; Knl., Splr. Schm. Eur. 2 273 Pf. 84·45 (1907)<sup>12</sup>; Zool. 21 (54 Pal. Tortr.) 55 no. 4 Pf. 2·14<sup>a</sup> (1908)<sup>13</sup>; Wlsm. Pr. Z. Soc. Lond. 1907 1002-3 sp. 131 (1908)<sup>14</sup>; Meyr. Pr. Z. Soc. Lond. 1908 720 (1908)<sup>15</sup>. *Eucosma plebeiana* Meyr. Pr. Linn. Soc. NSW. 36 248 sp. 347 (1911)<sup>16</sup>; Tr. Linn. Soc. Lond. (2 s. Zool.) 14 268 sp. 5 (1911)<sup>17</sup>.

*Types*: *plebeiana* Z. ♂ (Mus. Wlsm.) BM.; *obscura* E. Wlsth. ♂ ♀ BM.; *blackburnii* Btlr. ♀ BM.

*Hab.* ASIA, SW-S<sup>8, 14</sup>. EUROPE, S-C<sup>1-4, 7-14</sup>: ⊕ *Althea rosea*<sup>2, 9-12, 14, 16</sup>; *Lavatera arborea*<sup>3, 9-12, 14, 16</sup>. AFRICA, N-S<sup>14-15</sup>—MADEIRAS<sup>14</sup>—CANARIES; ⊕ *Malva parviflora*<sup>14</sup>—ST. HELENA<sup>5, 14</sup>—SEYCHELLES<sup>17</sup>. AMERICA, C-S-I. Central America<sup>8, 11-12, 14</sup>—MEXICO: TABASCO: Teapa, III. (H. H. Smith). South America<sup>8, 11-12, 14</sup>—BRAZIL<sup>10-11</sup>—PERU<sup>10-11</sup>—ARGENTINA<sup>10-11</sup>. West Indies<sup>10-11, 14</sup>—PORTO RICO: Bayamon, I. 1899 (A. Busck)—ST. CROIX: V. (W. von Hedemann; Pontoppidan)<sup>10</sup>—ST. THOMAS, III. (F. Gudmann)<sup>10</sup>—ST. VINCENT (H. H. Smith)<sup>10</sup>—GRENADA, III-V, X. (H. H. Smith)<sup>10</sup>. HAWAIIA<sup>6, 11, 14</sup>. AUSTRALIA<sup>8-11, 14-16</sup>.

[This species will probably be found to occur in the cotton-growing States—there is at least a strong suspicion that the larva feeds on *Gossypium* as well as *Malva*, *Althea*, and *Lavatera*. Drnt.]

## 2. *Eucosma patriciana*, sp. n.

*Antennae* pale brownish fuscous. *Palpi* extending scarcely beyond the frontal scales; mottled with greyish fuscous and whitish ochreous. *Head* greyish fuscous above, mottled with whitish ochreous at the sides and posteriorly. *Thorax* olivaceous, mixed with some ochreous scales. *Forewings* with a costal fold extending to the middle, and a tuft of raised scales on the upper edge of the discal fold near the base; whitish ochreous, mottled with dark olive-green, with a broad purplish fuscous shade commencing close to the base of the costa and extending to the fold as far as the end of the cell, thence attenuate upward and diffused in the direction of the apex; a series of whitish ochreous, outwardly oblique, geminated costal streaks from the middle to the apex; a roundish fuscous spot at the apex, preceded by two or more pale chestnut-brown lines, placed obliquely below the costal streaks; a somewhat lunate dark fuscous patch lies between the upper angle of the cell and the apical spot; the ocelloid patch is somewhat obliquely placed, silvery grey, with a slight olivaceous median shade traversed by two dark fuscous streaklets; the base of the dorsum is strongly shaded with dark purplish fuscous; cilia whitish ochreous, a narrow dark fuscous shade running through them near their base above the middle of the termen, below the middle and behind the tornus they are smeared with olivaceous fuscous. *Exp. al.* 13 mm. *Hindwings* inclining to transparency, with a bluish iridescence along the cell and on the costa above it, otherwise dark brownish with some iridescent scaling; cilia brownish cinereous, paler on their outer half. *Abdomen* brownish cinereous, a subochreous patch above it at the base, followed by a dark fuscous band. *Legs* whitish ochreous; hind tibiae neatly clothed, with two oblique transverse greyish fuscous shades on their outer sides; tarsi banded with brownish, broadly on the first, narrowly on the other joints.

*Type* ♂ (66438, Teapa) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PTT. (66439) US. Nat. Mus.; (3123, 3141 Wlsm. Det. 1898) Mus. Joannis.]

*Hab.* Central America—MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*): TABASCO: Teapa, III. (*H. H. Smith*)—COSTA RICA (*Mus. Joannis*). Four specimens.

This species differs from *plebeiana* Z. in the absence of a defined basal patch, in the green mottling, and in the dark costal shade; also in the form of the costal fold, which is elongate, not abbreviated. The tuft of scales on the hindwings is strongly elevated at the base, but appears somewhat less developed along the cubitus.

### 3. *Eucosma translucens*, sp. n. (Tab. VII. fig. 14.)

*Antennae* brownish fuscous, faintly barred above. *Palpi* projecting less than the length of the head beyond it; pale greyish fuscous. *Head* greyish fuscous, with a bluish lustre in some lights. *Thorax* mottled with pale cinereous and purplish fuscous. *Forewings* pale cinereous, with fawn-brown suffusion toward the apex; an oblique dorsal patch before the middle, reaching a little over the fold, and an oblique transverse fascia, from beyond the middle of the costa to the tornus, sending out a curved excrescence from its upper half to below the apex—these, together with a series of very oblique costal streaks are all umber-brown, with some fuscous and pale ochreous scaling; along the costa, between the darker streaks, are four or five pairs of geminated whitish ochreous streaklets; a slight grey shade indicates the inner margin of an ocelloid patch containing one black line; cilia umber-brown, dotted with fuscous and whitish ochreous, which forms a double terminal line at the apex. *Exp. al.* 13 mm. *Hindwings* strongly iridescent, semitransparent, brownish fuscous around the margins; a very distinct, elongate, transparent patch between veins 1 and 2; cilia greyish, with a darker line along their base. *Abdomen* brownish fuscous. *Legs* pale cinereous, with darker tarsal bands.

*Type* ♀ (66437) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula 6000 ft., VIII. (*H. H. Smith*). Unique.

### 4. *Eucosma lantana* Busck.

*Crociosema lantana* Busck Pr. Ent. Soc. Wash. 12 132-3 (1910)<sup>1</sup>.

*Type* ♂ (13149) US. Nat. Mus. [*PT.* ♂ (33846) BM.]

*Hab.* AMERICA, C. Central America<sup>1</sup>—MEXICO<sup>1</sup>. HAWAIIA<sup>1</sup>—OAHU<sup>1</sup>: Tantalus, ⊕ *Lantana* (*O. H. Swezey*)<sup>1</sup>.

### 5. *Eucosma albidula*, sp. n. (Tab. VII. fig. 18.)

*Antennae* cinereous. *Palpi* projecting the length of the head beyond it; white. *Head* white. *Thorax* white, mixed with ferruginous in front, and with some black scales posteriorly. *Forewings* white, with a series of black spots and streaklets along the costa, a spot at one-fourth from the base and one a little beyond the middle being the most conspicuous; a black spot on the fold, at one-third from the base, appears to indicate the outer angle of an obsolete basal patch containing some black and ferruginous freckles; there is a ferruginous shade on the dorsum, before the tornus, the white ocelloid patch beyond it containing some silvery metallic spots and two small black spots at its upper extremities; the apical part of the wing is ferruginous, and contains a steel-grey streak preceded by a smoky fuscous shade; cilia white on the middle and at the apex and tornus, speckled with black and ferruginous between these points, a slender white line running along their base. *Exp. al.* 16 mm. *Hindwings* and cilia smoky white, with a brownish shade toward the apex. *Abdomen* whitish. *Legs* white, with smoky tarsal bands.

*Type* ♀ (66469) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

Allied to 5120 *albangulana* Wlsm., but differing in the form of the markings and in its much paler colour.

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2 hh



6. **Eucosma cittopa**, sp. n. (Tab. VII. fig. 15.)

*Antennae* black; biserrate and biciliate in the ♂. *Palpi* (missing). *Head* blackish, with a white spot above. *Thorax* black. *Forewings* deep black, with a slight glazy sheen along the costa which is sprinkled throughout with snow-white speckling, forming ill-defined pairs of marginal streaklets; a large silvery white patch at the base of the dorsum contains a black spot near its commencement, and, following the margin to one-third, is upturned in a boot-shaped projection to the middle of the cell; beyond this, another large silvery white patch, commencing on the dorsum beyond the middle, where it contains a small black marginal dot, extends outward and upward in a sinuate line to the apex, and overspreads the whole terminal portion of the wing to the tornus, extending through the cilia, but leaving a large triangular black dorsal patch immediately before the tornus and two black spots in the cilia, one at the apex emitting a narrow black line downward along the margin, and a second on the middle of the termen—the upper portion of this silvery white patch is suffused with a pale yellowish wash. *Exp. al.* 21–22 mm. *Hindwings* brownish grey; cilia slightly paler. *Abdomen* brownish grey; anal tuft ochreous. *Legs* black, with white rings on the tibiae and tarsi.

*Type* ♂ (4699); ♀ (4700) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*). Two specimens.

In the ♀ the upper portion of the preapical white patch is suffused with brown, instead of yellowish as in the ♂.

7. **Eucosma tridentata**, sp. n. (Tab. VII. fig. 16.)

*Antennae* simple; rosy brownish, barred with fuscous above. *Palpi* oblique, porrect, median joint thickly clothed above and beneath; terminal joint depressed, smooth; brownish cinereous, mixed with reddish brown and fuscous. *Head* and *Thorax* dark fuscous. *Forewings* reddish brown, suffused with dark purplish fuscous, with a broad, outwardly oblique, rosy cinereous patch on the middle of the dorsum containing three, tooth-like, fuscous marginal spots; a small patch, at the base of the costa, is distinctly rosy reddish brown, the same colour being somewhat recalled on either side of the pale dorsal patch above its middle; the whole wing-colouring tends to be broken up into longitudinal lines, or streaks, in which dark fuscous prevails, especially along the upper edge of the fold and along the dorsum, as well as at the extreme apex; along the costa is a series of small, geminated, pale cinereous streaklets, separated by dark reddish fuscous, and there is some indication of a pale patch above the tornus, obscurely streaked longitudinally; cilia fuscous, broken by pale brownish ochreous patches. *Exp. al.* 28 mm. *Hindwings* dark brown; cilia brown, tipped with pale cinereous, a slender pale line along their base. *Abdomen* brownish fuscous. *Legs* brownish fuscous, with pale tarsal annulations.

*Type* ♀ (66467) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*). Unique.

8. **Eucosma elaeochroa**, sp. n. (Tab. VII. fig. 17.)

*Antennae* fuscous. *Palpi* projecting not more than the length of the head beyond it; brownish ochreous, shaded with fuscous externally. *Head* and *Thorax* brownish ochreous, the latter spotted with fuscous before and behind. *Forewings* olive-green, with shining, greyish, transverse streaks and much fuscous speckling, especially along the costa; a shining, white, quadrate dorsal patch, scarcely beyond the middle, is mixed with olive-green scales, and followed by a black cloud reaching nearly to the tornus; this is bounded on its outer and upper extremities by an angulated band of shining steel-grey which sends a branch upwards from the tornus, parallel with the termen; at the upper extremities of this double steel-grey band is another black cloud, and a smaller black spot rests on the apex; cilia olivaceous, much

shaded with dark fuscous, and speckled with steel-grey. *Exp. al.* 19 mm. *Hindwings* dark brown; cilia brownish grey. *Abdomen* brownish. *Legs* white, with darker tarsal bands.

*Type* ♀ (66468) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (*G. C. Champion*).  
Unique.

### 9. *Eucosma amulana*, sp. n.

*Antennae* half the length of the forewings, biciliate  $\frac{1}{2}$ , slightly serrate beyond the middle; fuscous, the cilia pale. *Palpi* projecting rather more than the length of head beyond it, amply clothed, porrect; mottled with fuscous and whitish ochreous externally. *Head* densely clothed, with slight projecting tuft; brownish fuscous. *Thorax* umber-brown, with a whitish ochreous band in front. *Forewings* with a costal fold extending two-thirds the length of the wing, the costa straight in the ♂, slightly convex in the ♀, termen slightly concave; umber-brown, with fuscous and whitish ochreous mottlings, the costa streaked with fuscous throughout; three whitish ochreous geminated streaks beyond the costal fold, a whitish dorsal streak before the middle, and some shining steel-grey streaks curving across the apical third of the wing; cilia much mottled with dark fuscous and whitish ochreous, a dark line along their base following a narrow whitish ochreous line along the margin—not extending to the tornus. *Exp. al.* 19–20 mm. *Hindwings* brownish; cilia shining, brownish grey, with a dark dividing line near their base. *Abdomen* shining, brownish grey. *Legs* whitish, the tarsi ochreous, banded with pale fuscous.

*Type* ♂ (66442); ♀ (66443) *Amula*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66444) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*); Omilteme, 8000 ft., VII. (*H. H. Smith*). Five specimens.

### 10. *Eucosma trimarginata*, sp. n. (Tab. VII. fig. 20.)

*Antennae* cinereous, closely banded above with fuscous. *Palpi* tawny grey, whitish on their inner sides. *Head* pale tawny. *Thorax* pale tawny brownish. *Forewings* tawny at the base, blending to brownish ferruginous beyond the middle; an ill-defined basal patch, reaching to nearly one-third of the wing-length, produced at its outer edge along the fold, above and below which it is margined by paler spots; a series of oblique, geminated, pale costal streaks from the basal patch to the apex, separated by fuscous scaling, a few shining leaden grey lines from their lower extremities extending, with more or less interruption, nearly to the termen; the ocelloid patch is indicated by a group of small black spots above the tornus, followed at a little distance by a few black scales; the dorsum is slightly spotted with fuscous; a slender whitish line along the base of the cilia, followed by a somewhat wider line of dark fuscous—the outer portion of the cilia being tawny brown gives the appearance of three distinct marginal lines along the slightly impressed and rather oblique termen. *Exp. al.* 18 mm. *Hindwings* brownish grey; cilia very pale greyish, a darker shade running through them near their base; underside slightly opalescent. *Abdomen* shining, silvery grey. *Legs* shining, whitish, the tarsi spotted with fuscous.

*Type* ♀ (66471) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft. VII. (*H. H. Smith*). Unique.

### 11. *Eucosma aporema*, sp. n. (Tab. VII. fig. 22.)

*Antennae* greyish fuscous. *Palpi* brownish ochreous, mixed with greyish fuscous. *Head* brownish ochreous. *Thorax* brownish ochreous, with a greyish fuscous shade posteriorly. *Forewings* with the costa slightly convex, termen oblique, the veins tending to converge in a well-marked, but not very abrupt situation about the middle; pale brownish ochreous, slightly mottled and suffused with darker, more brownish, shades; a conspicuous blackish streak, commencing on the middle of the cell, is angulated obliquely

upward at the end of the cell, and again outward, before reaching the costa, and terminates a little before and below a roundish spot, of the same colour, at the apex; a second blackish streak, commencing near the base, passes along the fold scarcely below the origin of the upper streak, and, shedding a fuscous suffusion toward the dorsum, terminates before a pale cinereous ocelloid patch, above the tornus, which contains two or three black spots on its outer half; the costa is alternately striate with pale and dark fuscous streaklets, those beyond the middle obliquely geminate, except the last pair near the apex which are inverted; cilia pale cinereous, sprinkled with blackish, a line of blackish sprinkling running through them near their base. *Exp. al.* 16 mm. *Hindwings* greyish brown; cilia pale cinereous, a brownish shade-line near their base. *Abdomen* greyish brown. *Legs* pale cinereous, the tarsi spotted above with fuscous.

*Type* ♀ (66485) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*). Two specimens.

## 12. *Eucosma cerdalea*, sp. n. (Tab. VII. fig. 19.)

*Antennae* brownish cinereous. *Palpi* pale cinereous, tinged with brownish externally. *Head* brownish grey. *Thorax* brownish. *Forewings* brownish, with a long costal fold in the ♂, extending nearly to the middle; at the outer extremity of the fold commences a large, chocolate-brown, quadrangular patch, placed obliquely, reaching nearly to the dorsum, and at its outer extremity connected with a smaller semilunate patch, curving down to the middle of the termen; above and beyond these patches the costa is obliquely streaked with brownish fuscous, alternating with three pairs of geminated pale cinereous lines, the extreme apex being chocolate-brown; in some lights a rosy tinge is visible on the ground-colour near the base, and a leaden grey sheen above the tornus; cilia brownish grey, with a slight rosy sheen, a pale cinereous line along their base. *Exp. al.* 15 mm. *Hindwings* greyish, an iridescent patch on the cell flecked with brown scales; cilia grey. *Abdomen* greyish. *Legs* greyish, with slightly paler tarsal bands.

*Type* ♂ (66470) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*). Unique.

## 13. *Eucosma alphabetica*, sp. n. (Tab. VII. fig. 21.)

*Antennae* bone-grey. *Palpi* greyish ochreous. *Thorax* brownish grey, with silver-white transverse bands behind the middle. *Forewings* dark fawn-brownish, minutely speckled with fuscous, and with numerous shining silver-white markings; an evenly broad streak from the base is cut off squarely and abruptly at the middle of the wing, a narrower but longer streak running parallel with it along the dorsum from the flexus to three-fourths; a little above the outer end of the latter a short, detached, streak points obliquely upward and outward, nearly meeting the apex of a bulb-shaped, outwardly pointed, streak coming from below the costa above it; beyond this again is a small costal spot, followed before the apex by a triangular costal patch enclosing a small brown costal spot; two other small triangular spots precede the middle of the termen, one above the other—the silver spots appear to be somewhat variable in size and number; cilia white, with a brownish line running through them. *Exp. al.* 23 mm. *Hindwings* greyish brown, a line of the same running through the pale whitish cinereous cilia. *Abdomen* greyish brown. *Legs* pale brownish cinereous.

*Type* ♂ (6011 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: MEXICO: Popocatepetl, 800–1000 ft., VII. 1906 (*W. Schaus*). Unique.

## ENARMONIA Hb.

= PANOPLIA Hb.; = SEMASIA Stph.; = ZEIRAPHERA Tr.; = ERIOPSELA Gn.; = HYPERMECTIA Gn.; = PAMPLUSIA Gn.; = PHANETA Stph.; = CALOSETIA Stn.; = CATASTEPA Clms.; = EPISIMUS Wlsm. (†EPISEMUS Dyar); = \*EPINOTIA (Hb.) Frnld.

Type 1 : *Tortrix wöberiana* S-D. (Stph. 1852).

ENARMONIA Hb. Verz. Schm. 375 sp. 3587-91 (1826). *CARPOCAPSA* Tr. (B. ENARMONIA Hb.) Stph. Ill. Br. Ent. Haust. 4 120-1 no. 289 sp. 5-8 (1834), 418 no. 1106 sp. 3587-90 (1835). *SEMASIA* Stph. (c. ENARMONIA Hb.) Stph. List Br. An. BM. 10 Lp. 49 no. 34 sp. 4 (1852). ENARMONIA Meyr. HB. Br. Lp. 455, 472-6 no. 9 sp. 1-12 (1895); Wlsm. Pr. Z. Soc. Lond. 1897 122 no. 59 sp. 163 (1897); Fn. Haw. 1 683-7, 736, 752 no. 42 sp. 377-81 Pf. 10-28-11-4 (1907); Frnld. Gn. Tortr. 6, 17, [19], 30, 31, 32, 35, 36, 39, 56 (1908). *SEMASIA* Stph. Cat. Br. Ins. 2 179-80 no. 258 sp. 6971-83 (1829); Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3) 179 no. 10 (1845); Eur. Micr. Ind. Meth. 45 (1845); Stph. List Br. An. BM. 10 Lp. 48-9 no. 34 sp. 1-4 (1852). [Cf. Frnld. Gn. Tortr. 23 (1908).]—Type: *wöberiana* S-D. (Gn. 1845).  
[*nec* \**ENARMONIA* (Hb.) Frnld. Bull. US. Nat. Mus. 52 469-70 sp. 5268-86 (1902); Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5683-702 (1903)—*pomonella* L. (*Cydia* Hb.).]

Type 2 : *Phalaena Tortrix cruciana* L. (Stph. 1834; Gn. 1845).

PANOPLIA (†*PANOPILAE*) Hb. Verz. Schm. 393 sp. 3816-7 (1826). *LOZOTAENIA* Stph. (B. d. PANOPLIA Hb.) Stph. Ill. Br. Ent. Haust. 4 80 no. 287 sp. 26 (1834). PANOPLIA Stph. Ill. Br. Ent. Haust. 4 420 sp. 3817 (1835); Frnld. Gn. Tortr. 17, 56 (1908). *HYPERMECIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 173 no. 5 (1845); Eur. Micr. Ind. Meth. 39 (1845); Stph. List Br. An. BM. 10 Lp. 41 no. 29 sp. 1 (1852); Wilk. Br. Tortr. 10, 15-16 no. 3 sp. 1 (1859); Stn. Mn. Br. B. & M. 2 190, 191 (1858), 458 no. 3 sp. 933 (1859); Frnld. Gn. Tortr. 31, 56 (1908)—Type: *cruciana* L. (Gn. 1845).  
\**EPINOTIA* (Hb.) Frnld. Bull. US. Nat. Mus. 52 464-6 sp. 5220-36 (1902); Dyar Pr. Ent. Soc. Wash. 5 230-1 (1903); Krft., Smith's Check-List Lp. Bor-Am. 103 sp. 5632-50 (1903); Can. Ent. 37 89, 253 (1905); 39 81, 126-7, 156-8 (1907); Tr. Am. Ent. Soc. 33 51-4, 92-3 (1907); Jr. NY. Ent. Soc. 16 176-7 (1908)—*cruciana* L. (= *augustana* Hb., Frnld. 2228).

Type 3 : *Tortrix corticana* Hb. (= *communana* Crt. 1831, 1838).

ZEIRAPHERA Tr. Schm. Eur. 7 231-2 no. 125 (1829); 8 168 (1830); Crt. Guide Br. Ins. 168-9 no. 952 sp. 1-10 (1831); Br. Ent. 15 expl. Pl. 711 (1838). *POECILOCHROMA* Stph. (b. ZEIRAPHERA Crt.) Stph. List Br. An. 10 Lp. 43 no. 31 sp. 2 (1852). ZEIRAPHERA Wlsm. Tr. Ent. Soc. Lond. 1895 515-6 (1895); Frnld. Gn. Tortr. 19, 56 (1908).

Type 4 : *Tortrix quadrana* Hb. (Frnld. 1908).

ERIOPELA Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 163 no. 1 (1843); Eur. Micr. Ind. Meth. 29 (1845); Stph. List Br. An. BM. 10 Lp. 68 no. 52 sp. 1-2 (1852); Wilk. Br. Tortr. 279, 282-4 no. 3 sp. 1-2 (1859); Stn. Mn. Br. B. & M. 2 266, 267, 464 no. 3 sp. 1185-6 (1859); Frnld. Gn. Tortr. 30, 56 (1908).

Type 5 : *Tortrix mercuriana* Fröl., Hb. (= *monticolana* Dp.; Gn. 1845).

PAMPLUSIA Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 180 no. 12 (1845); Eur. Micr. Ind. Meth. 46 (1845); Stph. List Br. An. BM. 10 Lp. 52 no. 37 sp. 1-2 (1852); Wilk. Br. Tortr. 183, 223-5 no. 10 sp. 1 (1859); Stn. Mn. Br. B. & M. 2 237, 249, 463 no. 10 sp. 1128 (1859); Frnld. Gn. Tortr. 32, 53 (1908).

Type 6: *Cochylis pauperana* Dp., HS. (Stph. 1852).

*SPILONOTA* Stph. (c. *PHANETA* Stph.) Stph. List Br. An. BM. 10 Lp. 32 no. 23 sp. 10 (1852); Frnld. Gn. Tortr. 35, 56 (1908).

Type 7: *Tortrix nigromaculana* Hw. (Wilk. 1859).

*CALOSETIA* Stn. Mn. Br. B. & M. 2 266, 271, 464 no. 6 sp. 1198 (5. III. 1859); Wilk. Br. Tortr. 279, 294-6 no. 6 sp. 1 (1. V. 1859); Frnld. Gn. Tortr. 36, 56 (1908).

Type 8: *Hedya signatana* Clms. (=  $\oplus$  *aceriella* Clms.; Fyles 1894).

$\oplus$  *CATASTEGA* Clms. Pr. Ent. Soc. Phil. 1 86-7 (1861): Clms-Stn. Tin. N-Am. pp. vii, 177-8 (1872); Fyles Ann. Rep. Ent. Soc. Ont. 24: 1893 42 (1894): 25: 1894 46 (1894); Dyar Bull. US. Nat. Mus. 52 511, 515, 517-8 sp. 5777, 5807, 5830 (1902); Busck Pr. US. Nat. Mus. 25 852-3 (1903); Dyar Pr. Ent. Soc. Wash. 5 128 (1903); Frnld. Gn. Tortr. 39, 56 (1908).

Type 9: *Carpocapsa transferrana* Wkr. (Wlsm. 1892).

*EPISIMUS* Wlsm. Pr. Z. Soc. Lond. 1891 501-2, 543 no. 16 sp. 32-3 Pf. 41 · 3<sup>a-b</sup> (1892): 1897 122-5 no. 60 sp. 164-8 (1897); Wlsm. & Drnt. Merton Rules 18 no. 51 (1896); Dyar Pr. Ent. Soc. Wash. 4 468, ( $\dagger$  *EPISEMUS*) 469-70 (1901); Frnld. Bull. US. Nat. Mus. 52 463 sp. 5206-7 (1902); Krft., Smith's Check-List Lp. Bor-Am. 103 sp. 5618-9 (1903); Frnld. Gn. Tortr. 45, 62 (1908).

### 1. *Enarmonia vittata*, sp. n.

*Antennae* stout, pubescent in the ♂; cinereous. *Palpi* short, scarcely projecting beyond the head; reddish brown, shaded externally; terminal joint fuscous. *Head* greyish fuscous. *Thorax* tawny brownish in front, shading to pale cinereous posteriorly; with a strong tuft of whitish hairs on each side, beneath the base of the forewings. *Forewings* tawny brownish, shaded with greyish fuscous, especially along the costa from the base, along the upper edge of the fold, and in two patches, one tending obliquely outwards from the middle of the costa, the other, more conspicuous, near the tornus; along the costa is a series of geminated, pale cinereous, oblique streaks, to the number of eight or nine pairs—the fifth pair from the apex sends out a blue-grey line to the termen below it and is joined by shorter lines coming from the other four pairs beyond it; a steel-grey metallic elongate dash, close to the lower half of the termen, bounds the outer edge of the ocelloid patch, in which are three short black streaks on pale tawny brown; cilia tawny. *Exp. al.* ♂ 17-19 ♀ mm. *Hindwings* brownish fuscous, strongly iridescent where denuded of scales; cilia pale grey. *Abdomen* greyish fuscous, anal tuft shining grey. *Legs* with the tibiae somewhat thickened and roughly clothed; shining, whitish, with strong iridescent reflections, tarsal joints banded with greyish fuscous.

Type ♂ (66472); ♀ (66474) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66473) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Three specimens.

### 2. *Enarmonia argutana* Clms.

= *allutana* Z.<sup>4</sup>

*Bactra*? *argutana* Clms. Pr. Ac. Nat-Sc. Phil. 12 358 (1860)<sup>1</sup>. *Grapholitha* (*Hedya*) *allutana* Z. Verh. ZB. Ges. Wien 25: 1875 Abh. 295-6 sp. 6 Pf. 9 · 27 (1875)<sup>2</sup>. *Bactra*? *argutana* Pkrd. US. Dp. Intr. (Ent. Com.) Bull. 7 69 (1881)<sup>3</sup>. *Semasia argutana* Frnld. Tr. Am. Ent. Soc. 10 45 sp. 319 (1882)<sup>4</sup>. *Bactra*? *argutana* Pkrd. US. Dp. Agr. Rp. 5 282 sp. 84 (1890)<sup>5</sup>. *Semasia argutana* Pkrd. US. Dp. Agr. Rp. 5 668 sp. 6 (1890)<sup>6</sup>; Mft. Can. Ent. 23 168 (1891)<sup>7</sup>.



*Episimus argutatus* Wlsm. Pr. Z. Soc. Lond. 1897 124 sp. 167 (1897)<sup>8</sup>; Dyar Pr. Ent. Soc. Wash. 4 469-70 (1901)<sup>9</sup>; Frnld. Bull. US. Nat. Mus. 52 463 sp. 5207 (1902)<sup>10</sup>; Krft., Smith's Check-List Lp. Bor-Am. 103 sp. 5619 (1903)<sup>11</sup>.

*Hab.* AMERICA, N-C-I. Canada<sup>7-8, 10</sup>. United States<sup>1-6, 8-11</sup>—MASSACHUSETTS<sup>2, 4</sup>: Beverly, 9. VII. 1868 (*Burgess*)<sup>2</sup>—NEW YORK<sup>2, 4</sup>—PENNSYLVANIA<sup>1, 4</sup>: ⊕ *Hammamelis virginica*<sup>1, 3-6, 8</sup>; *Rhus glabra*<sup>1, 3-5, 8</sup>; *Crataegus tomentosa*<sup>1, 3-5, 8</sup>; *Ulmus*<sup>1, 3-5, 8</sup>—FLORIDA<sup>9-10</sup>: Fort Worth, ⊕ *Euphorbia heterophylla* (*H. G. Dyar*)<sup>9</sup>—TEXAS<sup>4, 10</sup>: DALLAS (*J. Boll*)<sup>2</sup>: BOSQUE: 30. IV - 5. V. 1876 (*G. W. Belfrage*); 26. VII. (*G. W. Belfrage*)<sup>2</sup>; 11. X. 1876 (*G. W. Belfrage*)—ARIZONA: 1882 (*H. K. Morrison*)—CALIFORNIA: DEL NORTE: Siskiyou Mts., 7-16. VI. 1872 (*Wlsm.*): MENDOCINO: Head of Noyo River, 8-11. VI. 1871 (*Wlsm.*). Central America—MEXICO: VERA CRUZ: Vera Cruz, 21. V. 1908 (*F. Knab*): GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*)—COSTA RICA: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*). West Indies<sup>8, 10</sup>—BAHAMAS: NASSAU: 1902 (*Sir G. T. Carter*)—JAMAICA: ST. ANDREW: Constant Spring, 17. XII - 23. II. 1905 (*Wlsm.*): ST. ANN: Runaway Bay, 21. IV. 1905 (*Wlsm.*)—ST. CROIX<sup>8</sup>: 4. V - 15. VI. (*W. von Hedemann*; *Pontoppidan*)<sup>8</sup>—ST. THOMAS<sup>8</sup>: 18. III. (⊕ *Euphorbia* sp. ?—*F. Gudmann*)<sup>8</sup>—ST. LUCIA<sup>8</sup>: Point Michell, 25. V<sup>8</sup>—GRENADA<sup>8</sup>: Balthazar, 250 ft., 15-27. IV. (*H. H. Smith*)<sup>8</sup>.

### 3. *Enarmonia condensatana* Z.

*Grapholitha (Hedya) condensatana* Z. Hor. Soc. Ent. Ross. 13 162-3 sp. 5 (1877)<sup>1</sup>.

*Type* ♂ (*Chiriqui*) Mus. Stgr.

*Hab.* Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—PANAMA<sup>1</sup>: CHIRIQUI (*H. Ribbe*)<sup>1</sup>.

### 4. *Enarmonia transferrana* Wkr.

*Carpocapsa transferrana* Wkr. Cat. Lp. BM. 28 398 sp. 14 (1863)<sup>1</sup>. *Episimus transferrana* Wlsm. Pr. Z. Soc. Lond. 1891 502, 543 (1892)<sup>2</sup>. *Episimus transferranus* Wlsm. Pr. Z. Soc. Lond. 1897 123 sp. 164 (1897)<sup>3</sup>.

*Type* ♂ (1858:6) BM.

*Hab.* AMERICA, C-S. Central America MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*). South America<sup>1-3</sup>—BRAZIL<sup>1-3</sup>: AMAZONS<sup>1-3</sup>: Ega (*H. W. Bates*)<sup>1-3</sup>.

*Enarmonia condensatana* Z., *semicirculana* Wkr., *augmentana* Z., *transferrana* Wkr., and *vincentana* Wlsm. are all closely allied forms, but no good purpose would be served by uniting any of these names until longer series are available for study—*augmentana* has been recorded as feeding on *Rhus metopium* [Dyar Pr. Ent. Soc. Wash. 4 468 (1901)]—Drnt.

5. *Enarmonia cornucopis*, sp. n.

*Antennae* minutely ciliate in the ♀; dark tawny greyish. *Palpi* projecting scarcely the length of the head beyond it, closely clothed, the short terminal joint depressed; dark tawny fuscous. *Head* dark tawny grey. *Thorax* dark tawny ferruginous; densely tufted. *Forewings* narrow, elongate, with costa straightened beyond the slightly rounded base, apex obtuse, termen sinuate, scarcely oblique, tornus rounded; dark tawny greyish, with dark tawny ferruginous blotches—first, a short basal patch, wider on the costa than on the dorsum, its outer edge slightly convex; then, a large, elongate, costal patch containing a white cornucopia-shaped streak, slightly beyond the middle of the costa, its diminishing lower extremity turned outward; and again, a narrower streak pointing obliquely inward from the termen above the tornus and having a small cuneiform white streak at its upper edge separating it from a shorter diverging dark streak above it; a few dark dots are on the dorsum, and two or three on the costa in the white streak; cilia tawny ferruginous; underside fuscous, the costa and termen ferruginous, the white costal patch being visible. *Exp. al.* 19 mm. *Hindwings* 1, elongate, apex rounded, termen oblique; brownish grey; cilia scarcely paler. *Abdomen* brownish grey. *Legs* pale brownish cinereous.

*Type* ♀ (6029) US. Nat. Mus. [*PT.* (33942) Mus. Wlsm. BM.]

*Hab.* MEXICO: OAXACA: Salina Cruz, 1906 (*W. Schaus*). Two specimens.

## BACTRA Stph.

= § *APHELLIA* Stph.; = *LEPTIA* Gn.; = *CHILOIDES* Btlr.; = *NOTERAULA* Meyr.

Type 1: *Tortrix lanceolana* Hb. (Stph. 1834).

BACTRA Stph. = § *APHELLIA* Stph. Cat. Br. Ins. 2 180 no. 260 sp. 6985–9 (1829). BACTRA Stph. Ill. Br. Ent. Haust. 4 124–5 no. 290 sp. 1–5 (1834). *LEPTIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 169 no. 1 (1845): Eur. Micr. Ind. Meth. 35 (1845). *APHELLIA* Stgr-Wk. Cat. Lp. Eur. 251 no. 116 sp. 1006–11 (1871). BACTRA Z. Hor. Soc. Ent. Ross. 13 141–3 sp. 1–2 (1877). *APHELLIA* Wlsm. Tr. Ent. Soc. Lond. 1881 231–2 (1881). BACTRA Frnld. Tr. Am. Ent. Soc. 10 28–9 sp. 163–4 (1882); Wlsm. Pr. Z. Soc. Lond. 1897 121–2 no. 58 sp. 162 (1897): Ann-Mag. NH. (7 s.) 6 333–4 (1900); Stgr-Rbl. Cat. Lp. Pal. 2 113 no. 255 sp. 2017–20 (1901); Frnld. Bull. US. Nat. Mus. 52 449 sp. 5006–8 (1902); Krft., Smith's Check-List Lp. Bor-Am. 100 sp. 5409–11 (1903); Knl., Splr. Schm. Eur. 2 273 no. 11 sp. 1–4 Pf. 85 · 46–7 (1907); Wlsm. Fn. Haw. 1 687–9, 752 no. 43 sp. 382 Pf. 11 · 5 (1907); Frnld. Gn. Tortr. 23, 27, 31, 58 (1908); Wlsm. Pr. Z. Soc. Lond. 1907 1001–2 no. 63 sp. 129 (1908); Meyr. Jr. Bomb. NH. Soc. 19 583–7 (1909): Ann. Transv. Mus. 2 8–9 (1810), 227–8 (1911): 3 63 (1912), 275 (1913): Tr. NZ. Inst. 43 : 1910 89 no. 17 sp. 84–6 (1911): Pr. Linn. Soc. NSW. 36 225, 252–5 no. 57 sp. 354–9 (1911): Tr. Ent. Soc. Lond. 1911 689 (1912).

Type 2: *Chiloides straminea* Btlr. (Btlr. 1881).

*CHILOIDES* Btlr. Ann-Mag. NH. (5 s.) 7 392–3 sp. 25 (1881); Wlsm. Fn. Haw. 1 687–9 (1907); Frnld. Gn. Tortr. 44, 58 (1908).

Type 3: *Bactra noteraula* Wlsm. (= \**straminea* [nec Btlr.] Meyr.; Meyr. 1892).

*NOTERAULA* Meyr. = \**CHILOIDES* (nec Btlr.) Meyr. Tr. NZ. Inst. 17 : 1884 142 (1885). *NOTERAULA* Meyr. Tr. NZ. Inst. 24 (n. s. 7 : 1891) 217 (1892); Wlsm. Fn. Haw. 1 687–9 (1907); Frnld. Gn. Tortr. 46, 58 (1908).

1. *Bactra lanceolana* Hb.

*Tortrix lanceolana* Hb. Smlg. Eur. Schm. 7 Pf. 13·80 (1797)<sup>1</sup>. *Ancylis lanceolana* Hb. Verz. Schm. 376 sp. 3614 (1826)<sup>2</sup>. *Aphelia lanceolana* Stgr-Wk. Cat. Lp. Eur. 251 sp. 1006 (1871)<sup>3</sup>. *Bactra lanceolana* Frnld. Tr. Am. Ent. Soc. 10 28-9 sp. 163 (1882)<sup>4</sup>; Wlsm. Tr. Ent. Soc. Lond. 1894 537, 540 sp. 9 (1894)<sup>5</sup>; Rbl. Ann. KK. Hofmus. Wien 9 17, 86-7 sp. 152 (1894)<sup>6</sup>; 24 371 sp. 220 (1910)<sup>7</sup>; Wlsm. Pr. Z. Soc. Lond. 1897 121-2 sp. 162 (1897)<sup>8</sup>; Ann-Mag. NH. (7 s.) 6 333-4 sp. 1006 (1900)<sup>9</sup>; Stgr-Rbl. Cat. Lp. Pal. 2 113 sp. 2017 (1901)<sup>10</sup>; Frnld. Bull. US. Nat. Mus. 52 449 sp. 5006 (1902)<sup>11</sup>; Krft., Smith's Check-List Lp. Bor-Am. 100 sp. 5409 (1903)<sup>12</sup>; Wlsm. Pr. Z. Soc. Lond. 1907 1001-2 sp. 129 (1908)<sup>13</sup>.

*Hab.* EUROPE<sup>1-11,13</sup>: ⊕ *Juncus*<sup>4,6</sup>, *Cyperus*<sup>6</sup>. ASIA<sup>2,9-11</sup>. AMERICA, N-C-S-I<sup>4-5,8-13</sup>. United States<sup>4,11-12</sup>. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). West Indies<sup>8</sup>—JAMAICA: ST. ANDREW: Constant Spring, 17-24. XII. 1904 (Wlsm.): ST. ANN: Runaway Bay, 22. II - 28. III. 1905 (Wlsm.)—ST. THOMAS: III. (W. von Hedemann)<sup>8</sup>—ST. VINCENT (H. H. Smith)<sup>8</sup>—GRENADA: 250-1900 ft., IV-V, VIII. (H. H. Smith)<sup>8</sup>. South America<sup>8,10</sup>.

## OLETHREUTES Hb.

= ARGYROPOLOCE Hb.; = † HEDYA Hb. († HEDIA Z.); = APOTOMIS Hb.; = LIMMA Hb.; = PHIAIRIS Hb.; = CELYPHA Hb.; = EUDEMIS Hb.; = APHANIA Hb.; = † PENDINA Tr. († PENTHINA Tr.); = † SYRICORIS Tr. († SERICORIS Tr.); = THIRATES Tr.; = DITULA Stph. († DILUTA South); = ANTITHESIA Stph.; = ORTHOTAENIA Stph.; = § EUCHROMIA Stph. († EUCHROMA Dp.); = ROXANA Stph.; = SIDERIA Gn.; = SELENODES Gn.; = MIXODIA Gn.; = ATERPIA Gn.; = § MELODES Gn.; = STICTEA Gn.; = BRACHYTAENIA Stph.; = ENDOTHEIA Stph.; = ECCOPSIS Z.; = CYMOLOMIA Ldr.; = EXARTEMA Clms.; = DUDUA Wkr.; = PHAECASIOPHORA Grt.; = ECDYTOLOPHA Z.; = † PLATYPEPLUS Wlsm. († PLATYPEPLUM Wlsm.); = CACOCHARIS Wlsm.; = PHAECADOPHORA Wlsm.; = TEMNOLOPHA Lwr.; = SAROLOPHA Lwr.; = GYMNANDROSOMA Dyar († GYNANDROSOMA Sharp); = ACANTHOTHYSPODA Lwr.

Type 1: [*Phalaena Tinea*] *arcuella* Cl. (Hb. 1806).

OLETHREUTES Hb. Tent. 2 (1806). *ROXANA* Stph. Ill. Br. Ent. Haust. 4 118 no. 288 sp. 1 (1834), 418 no. 1105 sp. 3586 (1835); Crt. Guide Br. Ins. (2 ed.) 199 sp. 4-24 (1837); Stph. List Br. An. 10 Lp. 76 no. 63 sp. 1 (1852); Frnld. Gn. Tortr. 27, 54 (1908). § *MELODES* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 161 no. 7 (1845); Eur. Micr. Ind. Meth. 27 no. 7 (1845); Frnld. Gn. Tortr. 30, 54 (1908). \**EUCOSMA* (Hb.) Meyr. HB. Br. Lp. 455, 457-69 no. 5 sp. 1-41 tf. 460 (1895); Jr. Bomb. NH. Soc. 17 137 (1906), 732, 977 (1907): 18 137-40 (1907), 613 (1908): 19 592 (1909). OLETHREUTES Wlsm. Ann-Mag. NH. (7 s.) 6 127-30 sp. 924·8-9 (1900); Frnld. Bull. US. Nat. Mus. 52 451-5 sp. 5028-76 (1902); Krft., Smith's Check-List Lp. Bor-Am. 101 sp. 5431-79 (1903); Pr. US. Nat. Mus. 28 350 (1905); Can. Ent. 37 41-3, 207-8 (1905); Tr. Am. Ent. Soc. 33 8-16, 80-1 (1907); Bull. BIOL. CENTR.-AMER., Heter., Vol. IV., April 1914. 2 ii

Am. Mus. NH. **23** 157 (1907); Frnld. Gn. Tortr. **3**, 27, 30, 54 (1908); Busck Pr. US. Nat. Mus. **40** 227 Pf. **9**·**2** (1911); Meyr. Ent. Mo. Mag. **48** 34, 35 (1912).  
 [§ *Melodes* Gn. is homonymous with **MELODES** Keyserling (1840) *Aves*.]

Type 2: *Phalaena Tinea arbutella* L. (Stph. 1835; 1852).

**ARGYROPOLOCE** Hb. Verz. Schm. 379 sp. 3645-6 (1826). †**ARGYROPHOCE** Stph. Ill. Br. Ent. Haust. **4** 419 no. 1116 sp. 3646 (1835). **ARGYROPOLOCE** Hb. [~~dele~~ †**EUCHOMIA**] (a. **ARGYROPOLOCE** Hb.) Stph. List Br. An. BM. **10** Lp. 70-1 no. 57 a. sp. 1 [*vide errata* 120] (1852). **ARGYROPOLOCE** Wlsm. Ann-Mag. NH. (7 s.) **6** 234-43 (1900); Frnld. Gn. Tortr. **9**, 56 (1908); Meyr. Jr. Bomb. NH. Soc. **19** 592-607 (1909); Pr. Linn. Soc. NSW. **36** 225, 263-84 no. 64 sp. 373-417 (1911).

Type 3: *Phalaena Tinea salicella* L. (Stph. 1834).

**HEDIA** Hb. (†Z.) = †**HEDYA** Hb. Verz. Schm. 380 sp. 3658-62 (1826). **ANTITHESIA** Stph. (B. †**HEDYAE** Hb.) Stph. Ill. Br. Ent. Haust. **4** 89-90 no. 280 B. sp. 9 (1834), 419 no. 1119 sp. 3658-62 (1835); †**HEDIA** (ἡδύς, ἡδέια) Z. Hor. Soc. Ent. Ross. **13** 160 (1877). **HEDYA** Frnld. Gn. Tortr. **10**, 56 (1908). **PENTHINA** Tr. = †**PENDINA** Tr. Schm. Eur. **7** 227-8 no. 119 (1829). †**PENTHINA** Tr. Schm. Eur. **8** 21-44 no. 119 sp. 1-12 (1830). †**PENDINA** Crtr. Guide. Br. Ins. 167 no. 949 sp. 1-9 (1831). **PENTHINA** Stph. Ill. Br. Ent. Haust. **4** 87 (1834); Dp. Ann. Soc. Ent. Fr. **3**: **1834** 445 no. 8 (1834); HN. Lp. Fr. **9** 21 (1834), 184-204 no. 8 sp. 1582-9 Pf. **245**·**3**-10 (1835); Stph. List. Br. An. BM. **10** Lp. 29 no. 21 sp. 1 (1852); Stn. Mn. Br. B. & M. **2** 189, 196 (1858), 459 no. 7 sp. 951 (1859); Wilk. Br. Tortr. **11**, 35-6 no. 7 sp. 1 Pf. **3**·**3** (1859); Ldr. Wien. Ent. Mts. **3** 124, 282-8 no. 14 (1859). **GRAPHOLITHA** Tr. (B. **PENTHINA** Tr.) Hnmn. Schm. Deutsch. Tortr. 99, 103-15 no. 302 B. sp. 178-203, G. (A. **PENTHINA** Tr.) Tbl. 1, 15-17 no. 302 A. (1863); Stgr-Wk. Cat. Lp. Eur. 247-50 no. 114 sp. 925-1003 (1871); Frnld. Tr. Am. Ent. Soc. **10** 31-3 sp. 184-203 (1882). †**PENDINA** Frnld. Gn. Tortr. **18**, 57 (1908)—Type: *salicella* L. (*salicana* Tr.; Stph. 1834; Dp. 1834). \***ANTITHESIA** (Stph.) Dp. Cat. Meth. Lp. Eur. 295-6 no. 17 (1845); Gn. Ann. Soc. Ent. Fr. **14** (2 s. **3**: **1845**) 153 no. 3 (1845); Eur. Micr. Ind. Meth. **19** no. 3 (1845)—*salicella* L. (*salicana* Tr.; Dp.).

[*nec* \***SPILONOTA** Stph. (A. a. †**HEDYAE** Hb.) Stph. Ill. Br. Ent. Haust. **4** 90-2 no. 281 A. a. sp. 1-4 (1834), 419 no. 1119 sp. 3661 (1835); List Br. An. BM. **10** Lp. 30-1, 90 no. 23 a. sp. 1-8 (1852)—*roborana* S-D. (= *aquana* Hb., Stph.) (*Eucosma* Hb.).]

[*nec* \***HEDYA** (Hb.) Stn. Mn. Br. B. & M. **2** 218-21 tf. 219· (1858), 460-1 no. 1 sp. 1025-34 (1859); Wilk. Br. Tortr. 115, 116-27, 321 no. 1 sp. 1-10 Pf. **1**·**8**, (†**SPILONOTA**) Pf. **3**·**9** (1859)—*neglectana* Dp. (*Gypsonoma* Meyr.).]

[*nec* \***PENTHINA** Crtr. Br. Ent. **12** expl. Pl. **567** sp. 1-9 (1839)—Curtis wrongly cites as Type: *turbidana* Hb. (= §*corticana* Hb., Crtr.) (*Olethreutes* Hb.).]

Type 4: *Apotomis turbidana* Hb. (= §*corticana* Hb.; Frnld. 1908).

**APOTOMIS** Hb. Verz. Schm. 380 sp. 3663-7 (1826). **ANTITHESIA** Stph. (A. **APOTOMIS** Hb.) Stph. Ill. Br. Ent. Haust. **4** 87-9 no. 280 A. sp. 1-8 (1834), 419 no. 1120 sp. 3663-7 (1835); List Br. An. BM. **10** Lp. 26-8 no. 20 a. sp. 1-11 (1852). **APOTOMIS** Frnld. Gn. Tortr. **10**, 56

(1908). *ANTITHESIA* Stph. Cat. Br. Ins. 2 172-3 no. 251 sp. 6891-9 (1829) : Ill. Br. Ent. Haust. 4 86-90 no. 280 sp. 1-9 (1834), 419 sp. 3662-7 (1835) ; Wstwd. Syn. Gn. Br. Ins. 107 (1840) ; Westw. & Humph. Br. Moths 2 117-9 sp. 1-11 Pf. 81·12-22 (1844) ; Stph. List Br. An. BM. 10 Lp. 26-9 no. 20 sp. 1-15 (1852) ; Stn. Br. B. & M. 2 189, 192-6 ff. 193· (1858), 458-9 no. 6 sp. 937-50 (1859) ; Wilk. Br. Tortr. 10, 20-35 no. 6 sp. 1-14 Pf. 1·2 (1859) ; Frnld. Gn. Tortr. 22, 57 (1908)—Type : *turbidana* Hb. (= § *corticana* Hb., Crt. ; Westwd. 1840). \**PENTHINA* Crt. Br. Ent. 12 expl. Pl. 567 sp. 1-9 (1835) ; Dp. Cat. Meth. Lp. Eur. 296-7 no. 18 (1845) ; Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 151-3 no. 2 (1845) : Eur. Micr. Ind. Meth. 17-19 no. 2 (1845)—Type : *turbidana* Hb. (= § *corticana* Hb., Crt. 1835 ; = *capreana* Dp. ; = *picana* Fröl., Gn.).  
[*nec* \**ANTITHESIA* Dp. Cat. Meth. Lp. Eur. 295-6 no. 17 (1845) ; Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 153 no. 3 (1845) : Eur. Micr. Ind. Meth. 19 no. 3 (1845)—*salicella* L. (*Olethreutes* Hb.).]

Type 5 : *Tortrix inundana* S-D. (Frnld. 1908).

LIMMA Hb. Verz. Schm. 380-1 sp. 3668-9 (1826) ; Frnld. Gn. Tortr. 10, 56 (1908).

Type 6 : *Tortrix micana* Hb. (Stph. 1852).

PHIARIS Hb. Verz. Schm. 381 sp. 3678-9 (1826). *SERICORIS* Tr. (b. PHIARIS Hb.) Stph. List Br. An. BM. 10 Lp. 73-4 no. 61 b. sp. 6-7 (1852) ; Frnld. Gn. Tortr. 11, 56 (1908).  
[*nec* \**SERICORIS* Tr. (B. PHIARIS Hb.) Stph. Ill. Br. Ent. Haust. 4 134 no. 293 B. sp. 9 (1834), 419 no. 1124 sp. 3679 (1835)—*lacunana* S-D. (*Olethreutes* Hb.).]  
[*nec* \**LITHOGRAPHIA* Stph. (c. PHIARIS Hb.) Stph. List Br. An. BM. 10 Lp. 34-5 no. 24 c. sp. 7-10 (1852)—does not contain any of Hübner's Types : *penkleriana* (S-D) FR. (*Eucosma* Hb.) was evidently regarded as the exponent—but this is not Hübner's *penkleriana* S-D. (*micana* Hb. 28).]

Type 7 : *Phalaena rivulana* Sc. (= *conchana* Hb.)

CELYPHA Hb. Verz. Schm. 381-2 sp. 3680-3 (1826). *SERICORIS* Tr. (A. CELYPHA Hb.) Stph. Ill. Br. Ent. Haust. 4 131-4 no. 293 A. sp. 1-8 (1834), 419 no. 1125 sp. 3680-3 (1835) : List Br. An. BM. 10 Lp. 72-3, 95 no. 61 a. sp. 1-5 (1852)—Stephens restricts the possible Type to *rivulana* Sc. (= *conchana* Hb., Stph.) and *aemulana* Hb. (= § *urticana* Hb., Stph.), having previously (p. 71) removed *striana* S-D. to *Orthotaenia* Stph. ; Fernald Gn. Tortr. 11, 56 (1908) cited *striana* S-D. as the Type of *Celypha* Hb., but this citation ignores the effect of Stephens' action and cannot be accepted—*rivulana* Sc. (*conchana* Hb. 106) should be taken as Type. *SERICORIS* Tr. = † *SYRICORIS* Tr. Schm. Eur. 7 230-1 no. 122 (1829). ‡ *SERICORIS* Tr. Schm. Eur. 8 142-55 no. 122 sp. 1-9 (1830) ; Stph. Ill. Br. Ent. 4 131-7 no. 293 sp. 1-18 (1834), 419 no. 1125 sp. 3680-1, 3690 (1835) ; Evrsm. Enum. Lp. Volg-Ural. 19 (1834) ; Dp. Ann. Soc. Ent. Fr. 3 : 1834 445 no. 9 (1834) : HN. Lp. Fr. 9 21, 205-30 no. 9 sp. 1190-1200 Pf. 246·1-247·3 (1834) ; Sdf. Bull. Soc. Imp. Nat. Mosc. 10 92, 128 no. 126 (1837) ; Ztst. Ins. Lapp. pp. vi, 891, 983, no. 80 sp. 1-3 (1840) ; Wstwd-Humph. Br. Moths 2 144-7 sp. 1-18 Pf. 89·1-19 (1844) ; Evrsm. Fn. Lp. Volg-Ural. 501-2 no. 115 sp. 1-4 (1844) ; Dp. Cat. Meth. Lp. Eur. 300-2 no. 21 (1845) ; Gn. Ann. Soc. Ent. Fr. 14



(2 s. 3:1845) 156-60 no. 3 (1845): Eur. Micr. Ind. Meth. 22-6 no. 3 (1845); Z. Isis 39:1846 226-34 sp. 1-16 (1846): 40:1847 665-7 sp. 272-4 (1847); Tgstr. Not. Sällsk. Fn-Flor. Fenn. Förh. 1 79-82 sp. 1-12 (1847). *TORTRIX* L. (20 *SERICORIS* Tr.) HS. SB. Schm. Eur. 4 133, 208-18 no. 20 sp. 209-39 (1851): 6 Syst. Lp. Eur. 43-4 no. 20 sp. 633-65 (1855). *SERICORIS* Stph. List Br. An. BM. 10 Lp. 72-5, 95-6 no. 61 sp. 1-16 (1852); Stn. Mn. Br. B. & M. 2 260, 262-4, 464 no. 3 sp. 1169-80 (1859); Wilk. Br. Tortr. 259, 265-75 no. 3 sp. 1-12 Pf. 2 7-8 (1859). *GRAPHOLITHA* Tr. (C. a. *SERICORIS* Tr.) Hnmn. Schm. Deutsch. Tortr. 100, 115-34 no. 302 C. a. sp. 204-38 Tbl. 2, 17-22 (1863). *SERICORIS* Z. Verh. ZB. Ges. Wien 25:1875 Abh. 277-86 sp. 1-8 Pf. 8 17-19 (1875); Frnld. Tr. Am. Ent. Soc. 10 33-6 sp. 204-28 (1882). †*SYRICORIS* Frnld. Gn. Tortr. 19, 57 (1908).

[*nec* \**CELYPHA* (Hb.) Frnld. Gn. Tortr. 11, 56 (1908)—*striana* S-D. (*Olethreutes* Hb.): Type *teste* Frnld.]

[*nec* \**SERICORIS* (Tr.) Wstwd. Syn. Gn. Br. Ins. 108 (1840)—*aemulana* Hb. (= *§urticana* Hb. 65, Wstwd.) (*Olethreutes* Hb.): Type *teste* Wstwd.]

Type 8: *Tortrix profundana* S-D., F. (= *porphyrana* Hb., etc.; Stph. 1834).

*EUDEMIS* Hb. Verz. Schm. 382 sp. 3684-94 (1826). *DITULA* Stph. (A. b. *EUDEMIS* Hb.) Stph. Ill. Br. Ent. Haust. 4 84-5 no. 279 A. b. sp. 4-7 (1834), 419 no. 1126 sp. 3685 (1835). *EUDEMIS* Frnld. Gn. Tortr. 11, 56 (1908). *THIRATES* Tr. Schm. Eur. 7 233 no. 128 (1829); Crt. Guide Br. Ins. 167 no. 948 sp. 1-5 (1831); Stph. Ill. Br. Ent. Haust. 4 83 (1834); Crt. Br. Ent. 12. expl. Pl. 571 (1835)—Type: *profundana* S-D. (Crt. 1831). *DITULA* Stph. Cat. Br. Ins. 2 172 no. 250 sp. 6882-90 (1829); Crt. Guide Br. Ins. (2 ed.) 196 sp. 32-4 (1837); Wood Ind. Ent. 133-4, 260 Pl. 30 sp. 878-85 (1839); Wstwd. Syn. Gn. Br. Ins. 107 (1840). *TORTRIX* L. (19. *DITULA* Wd.) HS. SB. Schm. Eur. 4 133, 206-8 no. 19 sp. 202-8 (1851): 6 Syst. Lp. Eur. 43 no. 19 sp. 625-32 (1855). *DITULA* Frnld. Gn. Tortr. 22, 57 (1908)—Type: *profundana* S-D., Crt. 571 (Wstwd. 1840). \**PAEDISCA* (Tr.) Wstwd. & Humph. Br. Moths 2 115-7 sp. 1-9 Pf. 81 3-11 (1844).

Treitschke abandoned the genonym *Thirates* Tr., substituting *Paedisca* Tr. [Schm. Eur. 8 188-202 no. 126 sp. 1-9 (1830)] for the species included in *Thirates* in 1829.

[*nec* \**PSEUDOTOMIA* Stph. (A. *EUDEMIS* Hb.) Stph. Ill. Br. Ent. Haust. 4 98-9 no. 283 A. sp. 1-4 (1834), 419 no. 1126 sp. 3692 (1835)—*argyrana* Hb. (= \**strobilella* Stph.) (*Pammene* Hb.).]

[*nec* \**CNEPHASIA* Crt. (C. *EUDEMIS* Hb.) Stph. Ill. Br. Ent. Haust. 4 128-31 no. 292 C. sp. 4-12 (1834), 419 sp. 3694 (1835): List Br. An. BM. 10 Lp. 66 no. 48 b. sp. 15 (1852)—*nubilana* Hb., Stph. (*Tortrix* L.).]

[*nec* \**SERICORIS* Tr. (C. *EUDEMIS* Hb.) Stph. Ill. Br. Ent. Haust. 4 134-7 no. 293 C. sp. 10-18 Pf. 38 3 (1834), 419 no. 1126 sp. 3684, 3686-7, 36901, 3693-4 (1835): List Br. An. BM. 10 Lp. 74-5, 95 no. 61 c. sp. 8-16 (1852)—*cespitana* Hb., Stph. (*Olethreutes* Hb.).]

[*nec* \**LITHOGRAPHIA* Stph. (d. *EUDEMIS* Hb.) Stph. List Br. An. BM. 10 Lp. 35 no. 24 d. sp. 11-12 (1852)—*naevana* Hb. (*Rhopobota* Ldr.).]

[*nec* \**DUPOECILLA* Stph. (e. *EUDEMIS* Hb.) Stph. List Br. An. BM. 10 Lp. 96 e. sp. 18 (1852)—*pustulana* Hb., Stph. (—?) *vide* Stph. Ill. Br. Ent. Haust. 4 397 (1835).]

[*nec* \**EUDEMIS* Stgr-Wk. Cat. Lp. Eur. 251 no. 117 sp. 1012-24 (1871); etc.—*botrana* S-D. (*Polychrosis* Rgt.): contains none of Hübner's Types.]

[*nec* \**DITULA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 151 no. 1 (1845) : Eur. Micr. Ind. Meth. 17 no. 1 (1845). †*DILUTA* South Ent. Syn. List Br. Lp. 23 (1884)—*scriptana* Hb. (= *hartmanniana* Dp., Gn.) (*Olethreutes* Hb.).]

[*nec* \**DITULA* Stph. List Br. An. BM. 10 Lp. 41 no. 30 sp. 1 (1852) ; Stn. Mn. Br. B. & M. 2 201, 204 (1858), 459 no. 2 sp. 976 (1859) ; Wilk. Br. Tortr. 53, 65-7 no. 2 sp. 1 Pf. 3·6 (1859)—*angustiorana* Hw. (*Batodes* Gn.).]

[*nec* \**POECILOCHROMA* Stph. (a. *DITULA* Stph.) Stph. List Br. An. BM. 10 Lp. 42 no. 31 a. sp. 1 (1852)—*profundana* S-D. (*Olethreutes* Hb.).]

Type 9: *Tortrix scriptana* Hb. (= *lineana* Hb. Verz. ; Stph. 1834).

APHANIA Hb. Verz. Schm. 386 sp. 3743-6 (1826). *DITULA* Stph. (B. APHANIA Hb.) Stph. Ill. Br. Ent. Haust. 4 86 no. 279 B. sp. 8-9 (1834), 419 no. 1136 sp. 3746 (1835). *BRACHYTAENIA* Stph. (b. APHANIA Hb.) Stph. List Br. An. BM. 10 Lp. 26 no. 19 b. sp. 2 (1852). APHANIA Frnld. Gn. Tortr. 13, 57 (1908). \**DITULA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 151 no. 1 (1845) : Eur. Micr. Ind. Meth. 17 no. 1 (1845). [*nec* \**ACLERIS* Hb. (B. APHANIA Hb.) Stph. Ill. Br. Ent. Haust. 4 163 no. 300 B. sp. 5 (1834), 419 no. 1136 sp. 3744 (1835). *OXYGRAPHA* Hb. (b. APHANIA Hb.) Stph. List Br. An. BM. 10 Lp. 12 no. 9 b. sp. 4 (1852)—*boscana* F. (= *cerusana* Hb.) (*Oxygrapha* Hb.).]

Type 10: *Tortrix striana* S-D. (Gn. 1845).

ORTHOTAENIA Stph. Cat. Br. Ins. 2 181-2 no. 264 sp. 7006-22 (1829) ; Crt. Guide Br. Ins. 171 no. 960 sp. 1-20 (1831) : (2 ed.) 200 no. 960 sp. 1-10 (1837) ; Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3 : 1845) 162 no. 10 (1845) : Eur. Micr. Ind. Meth. 28 no. 10 (1845) ; Stph. List Br. An. BM. 10 Lp. 71, 95 no. 58 sp. 1-3 (1852). \**CELYPHA* (Hb.) Frnld. Gn. Tortr. 11, 56 (1908). [*nec* \**ORTHOTAENIA* Crt. Br. Ent. 8 expl. Pl. 364 (1831) ; Stph. Ill. Br. Ent. Haust. 4 178 (1834) ; Wstwd. Syn. Gn. Br. Ins. 109 (1840) ; Wstwd. & Humph. Br. Moths 2 171-2 sp. 1-10 Pf. 99·1-14 (1844) ; Crt. Tr. Ent. Soc. Lond. (n. s.) 3 59 (1854)—*pinicolana* Dbld. (= \**turionana* Crt. (*Rhyacionia* Hb.) : wrongly cited as Type by Curtis in 1831.) [*nec* \**ORTHOTAENIA* Stn. Mn. Br. B. & M. 2 260, 262, 464 no. 2 sp. 1168 (1859) ; Wilk. Br. Tortr. 258-9, 263-4 no. 2 sp. 1 (1859)—*antiquana* Hb. (*Olethreutes* Hb.).] [*nec* \**ORTHOTAENIA* (Stph.) Frnld. Gn. Tortr. 23-4, 57 (1908)—Fernald gives as Type *aemulana* Hb. (= *§urticana* Hb., Frnld.) (*Olethreutes* Hb.), stating that Westwood made this citation, but Westwood cited *aemulana* Hb. (= *§urticana* Hb., Wstwd.) as the Type of *Sericoris* Tr., giving *Orthotaenia* Stph. as a synonym (Syn. Gn. 108), and (l. c. 109) he cited *pinicolana* Dbld. (= \**turionella* Crt. 364) as the Type of *Orthotaenia* Curt., which genus Curtis himself attributes to Stephens !]

Type 11: *Phalaena rufana* Sep. (= *purpurana* Hw. ; Wstwd. 840).

§*EUCHROMIA* Stph. Cat. Br. Ins. 2 183-4 no. 268 sp. 7032-3 (1829) : Ill. Br. Ent. Haust. 4 143 no. 297 sp. 1-2 (1834) ; Wstwd. Syn. Gn. Br. Ins. 108 (1840) ; Wstwd. & Humph. Br. Moths 2 150 sp. 1-3 Pf. 91·1-3 (1844). †*EUCHROMIA* Dp. Cat. Meth. Lp. Eur. 391 (1845). *TORTRIX* L. (17. *EUCHROMIA* Stph.) HS. SB. Schm. Eur. 4 132, 204-6 no. 17 sp. 195-200

(1851): 6 Syst. Lp. Eur. 43 no. 17 sp. 618-23 (1855). *ARGYROPOLOCE* Hb. [~~dele~~ † *EUCHROMIA*] (b. *EUCHROMIA* Stph.) Stph. List Br. An. BM. 10 Lp. 70-1, no. 57 b. sp. 2-3 [*vide errata* 120] (1852). § *EUCHROMIA* Stn. Mn. Br. B. & M. 2 260-1, 464 no. 1 sp. 1162-7 (1859); Wilk. Br. Tortr. 259-63 no. 1 sp. 1-6 Pf. 4·9 (1859). *GRAPHOLITHA* Tr. (A. *EUCHROMIA* Stph.) Hnmn. Schm. Deutsch. Tortr. 100-3 no. 302 A. sp. 172-7 Tbl. 2, 17 (1863). § *EUCHROMIA* Frnld. Gn. Tortr. 24, 57 (1908).  
[§ *Euchromia* Stph. is homonymous with *EUCHROMIA* Hb. (1820) *Lep.*]

Type 12: *Tortrix achatana* S-D. (Gn. 1845).

*SIDERIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 156 no. 2 (1845): Eur. Micr. Ind. Meth. 22 no. 2 (1845); Stph. List Br. An. BM. 10 Lp. 72 no. 60 sp. 1 (1852); Stn. Mn. Br. B. & M. 2 190, 196-7 (1858), 459 no. 8 sp. 952 (1859); Wilk. Br. Tortr. 10, 37-8 no. 8 sp. 1 (1859); Frnld. Gn. Tortr. 29, 57 (1908).

Type 13: *Selenodes dalecarliana* Gn. (Gn. 1845).

*SELENODES* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 160 no. 4 (1845): Eur. Micr. Ind. Meth. 26 no. 4 (1845); Frnld. Gn. Tortr. 29, 57 (1908).

Type 14: *Pyralis schulziana* F. (Gn. 1845).

*MIXODIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 160 no. 5 (1845): Eur. Micr. Ind. Meth. 26 no. 5 (1845); Stph. List Br. An. BM. 10 Lp. 75-6 no. 62 sp. 1-3 (1852); Stn. Mn. Br. B. & M. 2 260, 264-5, 464 no. 4 sp. 1181-2 (1859); Wilk. Br. Tortr. 259, 275-7 no. 4 sp. 1-2 (1859); Frnld. Gn. Tortr. 29, 57 (1908).

Type 15: *Aterpia anderreggana* Gn. (Gn. 1845).

*ATERPIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 161 no. 6 (1845): Eur. Micr. Ind. Meth. 27 no. 6 (1845); Frnld. Gn. Tortr. 29-30 (1908).

Type 16: *Tortrix mygindana* S-D. (= *flammeana* Fröl.; Gn. 1845).

*STICTEA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 161-2 no. 9 (1845): Eur. Micr. Ind. Meth. 27-8 no. 9 (1845); Frnld. Gn. Tortr. 30, 57 (1908).

Type 17: *Tortrix semifasciana* Hw. (Stph. 1852).

*BRACHYTAENIA* Stph. (a. *BRACHYTAENIA* Stph.) Stph. List Br. An. BM. 10 Lp. 25-6 no. 19 sp. 1 (1852). *BRACHYTAENIA* Stn. Mn. Br. B. & M. 2 190, 192 (1858), 458 no. 5 sp. 935-6 (1859); Wilk. Br. Tortr. 11, 18-20 no. 5 sp. 1-2 (1859); Frnld. Gn. Tortr. 35, 57 (1908).

Type 18: *Tortrix gentianana* Hb. (*gentiana* Hb.; Frnld. 1908).

*ANTITHESIA* Stph. (b. *ENDOTHENIA* Stph.) Stph. List Br. An. BM. 10 Lp. 28 no. 20 b. sp. 12-14 (1852). *ENDOTHENIA* Frnld. Gn. Tortr. 35, 57 (1908).

Type 19: *Eccopsis wahlbergiana* Z. (Z. 1852).

*ECCOPSIS* Z. Lp-Micropt. Wahlbg. Caffr. 79-81 (1852) : Kngl. Svensk. Vet-Ak. Hndl. 73: 1852 79-81 (1854) : Verh. ZB. Ges. Wien 25: 1875 Abh. 268 (1875) ; Wlsm. Tr. Ent. Soc. Lond. 1881 229-31, 286 tf. 230 ·, Pf. 10 · 7 (1881) : 1891 70-1 Pf. 3 · 7 (1891) : 1897 56-7 Pf. 3 · 21 (1897) : Ann-Mag. NH. (7 s.) 6 128-9 (1900) ; Frnld. Pap. 1. 219-20 (1881) : Gn. Tortr. 36, 59 (1908) ; Meyr. Pr. Z. Soc. Lond. 1908 717-8 (1908) : Ann. Transv. Mus. 2 9 (1910) : 3 276 (1913).

[*nec* \**ECCOPSIS* Ldr. Wien. Ent. Mts. 3 124, 288 no. 15 Pf. 2 · 3 (1859) ; Stgr-Wk. Cat. Lp. Eur. 251 no. 120 sp. 1027 (1871)—*latifasciana* Hw. (= *venustana* Hb., Ldr.) (*Loxoterna* Busck).]

[*nec* \**ECCOPSIS* Meyr. Tr. Ent. Soc. Lond. 1886 274-5 (1886)—*aprobola* Meyr. (*Olethreutes* Hb.).]

Type 20: *Sciaphila? hartigiana* Rtzbg. (Ldr. 1859).

*CYMOLOMIA* Ldr. Wien. Ent. Mts. 3 374-5 (1859) ; Stgr-Wk. Cat. Lp. Eur. 100 no. 70 sp. 875 (1861) ; Wkr. Cat. Lp. BM. 27 250-1 no. 27 sp. 1 (1863). *GRAPHOLITHA* Tr. [G. *ECCOPSIS* Z. (a. *CYMOLOMIA* Ldr.)] Hnmn. Schm. Deutsch. Tortr. 139 no. 302 G. a. sp. 248, Tbl. 2 (1863). *CYMOLOMIA* Stgr-Wk. Cat. Lp. Eur. 251 no. 119 sp. 1026 (1871) ; Wlsm. Ann-Mag. NH. (7 s.) 6 128-9 no. 3 (1900) ; Stgr-Rbl. Cat. Lp. Pal. 2 109 no. 245 sp. 1964 (1901) ; Fuchs Stett. Ent. Ztg. 64 7-8 sp. 5 (1903) ; Busck Ent. News 17 305 (1906) ; Frnld. Gn. Tortr. 38, 59 (1908).

Type 21: *Tortrix antiquana* Hb. (Stn., Wilk. 1859).

\**ORTHOTAENIA* (Stph.) Stn. Mn. Br. B. & M. 2 260, 262, 464 no. 2 sp. 1168 (1859) ; Wilk. Br. Tortr. 258-9, 263-4 no. 2 sp. 1 (1859).

Type 22: *Exartema nitidana* Clms. (Frnld. 1881).

*EXARTEMA* Clms. Pr. Ac. Nat-Sc. Phil. 12 356-7 (1860) ; Wkr. Cat. Lp. BM. 30 993-4 sp. 1-5 (1864). *SERICORIS* (Tr.) Clms. Pr. Ent. Soc. Phil. 5 133-6 (1865). *EXARTEMA* Z. Verh. ZB. Ges. Wien 25: 1875 Abh. 268-76 sp. 1-6 Pf. 8 · 14-15 (1875) ; Wlsm. Ill. Typ. Lp-Het. BM. 4 pp. x, 36-8 Pf. 68 · 7-9, 75 · 4 (1879) ; Frnld. Pap. 1 219-20 (1881). *ECCOPSIS* Frnld. Pap. 1 219-20 (1881) : Tr. Am. Ent. Soc. 10 29-31 sp. 165-83 (1882) ; Grt. Check-List. N-Am. Moths 59 sp. 167-85 (1882). *EXARTEMA* Frnld., Smith's List Lp. Bor-Am. 91 no. 4782-800 (1891) ; Wlsm. Ann-Mag. NH. (7 s.) 6 124-7, 128-9 sp. 1-7 (1900) ; Frnld. Bull. US. Nat. Mus. 52 450-1 sp. 5009-27 (1902) ; Krft., Smith's Check-List Lp. Bor-Am. 100-1 sp. 5412-30 (1903) ; Can. Ent. 37 206 (1905) ; Busck Ent. News 27 305 (1906) ; Krft. Bull. Am. Mus. NH. 23 155-7 Pf. 8 · 1-2 (1907).

[\*Frnld. Gn. Tortr. 39, 59 (1908) cites *permundatum* Clms. as Type, overlooking the fact that, in *Papilio* 1 219 (1881), he had already designated "nitidana, the type of Clemens' genus *Exartema*."]

Type 23: *Dudua hesperialis* Wkr. (Wkr. 1864).

*DUDUA* Wkr. Cat. Lp. BM. 30 1000 sp. 1 (1864) ; Wlsm. Ann-Mag. NH. (7 s.) 6 134-5 (1900) ; Frnld. Gn. Tortr. 68 (1908).

Type 24: *Sciaphila confixana* Wkr. (Grt. 1873 ; Frnld. 1882).

*PHAECASIOPHORA* Grt. Bull. Buff. Soc. NH. 1 90-1 Pf. 2 · 4-6, · 15 (1873) ; Z. Verh. ZB. Ges. Wien 25: 1875 Abh. 276-7 (1875) ; Wlsm. Ill. Typ. Lp-Het. BM. 4 pp. x, 36 Pf. 68 · 6

(1879); Frnld. Tr. Am. Ent. Soc. 10 36 sp. 229 (1882); Wlsm. Tr. Ent. Soc. Lond. 1891 73-4 Pf. 3 10-11 (1891); Ann-Mag. NH. (7 s.) 6 135-7 sp. 14-15 (1900); Frnld. Bull. US. Nat. Mus. 52 455 sp. 5077 (1902); Krft., Smith's Check-List Lp. Bor-Am. 101 sp. 5480 (1903); Frnld. Gn. Tortr. 41, 60 (1908).

Type 25: *Ecdytolopha insiticiana* Z. (Z. 1875).

*ECDYTOLOPHA* Z. Verh. ZB. Ges. Wien 25: 1875 266-7 Pf. 8 20 (1875); Frnld. Tr. Am. Ent. Soc. 10 53 sp. 394 (1882); Bull. US. Nat. Mus. 52 470 sp. 5287 (1902); Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5703 (1903); Frnld. Gn. Tortr. 41, 60 (1908).

Type 26: *Eccopsis aprobola* Meyr. (Wlsm. 1887).

*PLATYPEPLUM* Wlsm. = \**ECCOPSIS* Meyr. Tr. Ent. Soc. Lond. 1886 274-5 (1886). †*PLATYPEPLUS* Wlsm., Moore's Lp. Ceyl. 3 495-6 Pf. 208 2 (1887); Cotes-Swinh. Cat. Moths Ind. 698 sp. 4759 (1889). ‡*PLATYPEPLUM* Wlsm. Ind. Mus. Notes 4 105 (1899). *PLATYPEPLUS* Meyr. Jr. Bomb. NH. Soc. 16 583-6 (1905); 17 136-7 (1906), 732 (1907); 18 137-8 (1907); 19 592 (1909); Frnld. Gn. Tortr. 45, 46, 62 (1908).

Type 27: *Cacocharis albimacula* Wlsm. (Wlsm. 1892).

*CACOCHARIS* Wlsm. Pr. Z. Soc. Lond. 1891 503, 543 no. 17 sp. 34 Pl. 41 4<sup>a-b</sup> (1892); 1897 125 no. 61 sp. 169 (1897); Frnld. Gn. Tortr. 45, 62 (1908).

Type 28: *Phaecadophora fimbriata* Wlsm. (Wlsm. 1900).

*PHAECADOPHORA* Wlsm. Ann-Mag. NH. (7 s.) 6 130-4 sp. 10-13 (1900); Frnld. Gn. Tortr. 47, 62 (1908).

Type 29: *Temnolopha mosaica* Lwr. (Frnld. 1908).

*TEMNOLOPHA* Lwr. Tr. Roy. Soc. S-Austral. 25 72-3 (1901); Frnld. Gn. Tortr. 48, 63 (1908); Meyr. Pr. Linn. Soc. NSW. 36: 1911 263 (1911).

Type 30: *Sorolopha cyclotoma* Lwr. (Lwr. 1901).

*SOROLOPHA* Lwr. Tr. Roy. Soc. S-Austral. 25 73-4 (1901); Frnld. Gn. Tortr. 48, 63 (1908); Meyr. Pr. Linn. Soc. NSW. 36: 1911 263 (1911).

Type 31: *Gymnandrosoma punctidiscanum* Dyar (Dyar 1904).

*GYMNANDROSOMA* Dyar Pr. Ent. Soc. Wash. 6 60 (1904). †*GYNANDROSOMA* Sharp Zool. Rec. 41: 1904 Ins. 291, Index 8 (1905). *GYMNANDROSOMA* Krft. Pr. US. Nat. Mus. 28 362 (1905); Frnld. Gn. Tortr. 48, 63 (1908).

Type 32: *Celypha aemulana* Hb. (= *§urticana* Hb.; Frnld. 1908).

\**ORTHOTAENIA* (Stph.) Frnld. Gn. Tortr. 23-4, 57 (1908). [Fernald states that "Westwood, Generic Synopsis, page 108, named *urticana* Hb. the type of *Orthotaenia* Steph." This is incorrect: Westwood cited *aemulana* Hb. (= *§urticana* Hb., Wstwd.) as the Type of *Sericoris* Tr., sinking *Orthotaenia* Stph. as a synonym, while, on p. 109, he followed Curtis citing *pinicolana* Dbld. (= *turionella* L., Curt.) as the Type of "*Orthotaenia* Curt."—Curtis rightly refers this genus to Stephens (*vide* Guide 171, and Br. Ent. 8 expl. Pl. 364). The citation of



*aemulana* Hb. (= *§urticana* Hb.) as the Type of *Orthotaenia* Stph. should be attributed to Fernald, not to Westwood.]

Type 33: *Exartema permundanum* Clms. (*permundana* Clms.; Frnld. 1908).

\**EXARTEMA* (Clms.) Frnld. Gn. Tortr. 39, 59 (1908). [Fernald cites *permundanum* Clms. as the Type, overlooking the fact that, in *Papilio* 1 219 (1881), he had already designated "*nitidana*, the type of Clemens' genus *Exartema*."] ]

Type 34: *Acanthothyspoda elaeodes* Lwr. (Lwr. 1908).

*ACANTHOTHYSPODA* Lwr. Tr. Roy. Soc. S-Austral. 32 319-20 (1908); Meyr. Pr. Linn. Soc. NSW. 36:1911 263 (1911).

### 1. *Olethreutes anaphorana*, sp. n. (Tab. VII. fig. 23.)

*Antennae* shortly biciliate, serrate toward the apex; fawn-brown, barred with blackish above. *Palpi* short, erect, densely but smoothly clothed, the short obtuse terminal joint scarcely visible; dark purplish fuscous. *Head* dark reddish brown. *Thorax* smooth, dark purplish fuscous. *Forewings* very dark purplish fuscous, with an olivaceous brownish tinge from the middle of the base, overflowing the fold and the cell and dilated upward toward the costa before the apex; standing out against the purplish gloss, on the commencement of the outer half of the fold, is a deep tawny black triangular patch, followed by a smaller one, above its outer angle at the end of the cell, containing a few rosy scales; there are a few costal spots, and a broken transverse antemarginal streak, almost equally dark in colour; cilia smoky greyish fuscous, rosy tinged in some lights. *Exp. al.* 23 mm. *Hindwings* dark chocolate-brown, with some purplish suffusion; cilia greyish. *Abdomen* dark brownish. *Legs* brownish cinereous, spotted with fuscous.

Type ♂ (66490) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*). Unique.

### 2. *Olethreutes holodesma*, sp. n. (Tab. VII. fig. 24.)

*Antennae* cinereous, very faintly and closely barred above with grey. *Palpi* projecting nearly the length of the head beyond it; dark greyish fuscous. *Head* dark purplish fuscous, some long ochreous scales mixed with the erect lateral tufts above the eyes. *Thorax* greyish fuscous. *Forewings* creamy whitish, much shaded and mottled with leaden grey and greyish fuscous, the ground-colour being almost obliterated on the basal and costal half of the wing, and appearing chiefly toward the outer half of the dorsum and lower two-thirds of the termen—this pale space is divided by a narrow greyish fuscous band, coming from the costal shade opposite to the commencement of the costal cilia and reaching the commencement of the dorsal cilia; the fuscous band is minutely strigulated throughout with whitish, as is also a short, oblique, transverse shade crossing the wing before the apex; cilia creamy white, mottled with greyish about the apex; underside with a slightly mottled appearance. *Exp. al.* 24 mm. *Hindwings* brownish grey; cilia paler, with a dark dividing shade; underside with a slightly mottled appearance. *Abdomen* brownish grey. *Legs* brownish grey (broken).

Type ♀ (66494) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: MORELOS: Cuernavaca, VI. (*H. H. Smith*). Unique.

This species differs from 5287 *Olethreutes (Ecdytolopha) insiticiiana* Z., from Massachusetts, etc., more especially in the absence of the anteternal triangular dorsal spot—in *holodesma* this is replaced by a continuous transverse band.

BIOL. CENTR.-AMER., Heter., Vol. IV., April 1914.

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### 3. *Olethreutes delphinosema*, sp. n. (Tab. VII. fig. 25.)

*Antennae* cinereous; serrate towards the apex. *Palpi* projecting the length of the head beyond it; cinereous beneath, shaded with fuscous and tawny reddish at the sides. *Head* tawny red. *Thorax* tawny reddish, mixed with fuscous; a shining ferruginous tuft behind. *Forewings* tawny reddish, especially along the costa, with a broad clouded shade of brownish fuscous commencing narrowly on the middle of the costa and diffused downwards toward the tornus, where it is mixed with some leaden grey; a slightly darker fuscous mark, arising in the middle of this shade, forms an angulated band stretching outward, dilated into a subapical patch beyond the cell and reaching to the middle of the termen; on the costa above it are several, dark fuscous, oblique streaks alternating with tawny reddish and some leaden grey, a curved dark fuscous spot, at the extreme apex, and an outwardly oblique dorsal patch, near the base, complete the darker markings of the wing; cilia dark leaden grey, with a fuscous line along their base. *Exp. al.* 18 mm. *Hindwings* dark brownish fuscous; cilia pale leaden grey, with a dark line along their base. *Abdomen* brownish fuscous. *Legs* pale cinereous.

*Type* ♀ (66499) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: SOLOLA: Volcan de Atitlan, 2500–3500 ft., XII.1880 (G. C. Champion). Unique.

### 4. *Olethreutes hieroglypta*, sp. n.

*Antennae* minutely biciliate in the ♂; tawny cinereous. *Palpi* tawny reddish cinereous. *Head* and *Thorax* tawny cinereous, the latter with a raised ferruginous tuft behind. *Forewings* tawny reddish cinereous, with some minute, obscure, darker strigulations; a sinuate blackish patch, somewhat clearly defined along its upper and inner edge by a slender pale line, descends slightly outward from the middle of the costa to the lower edge of the cell where it is bent outward, and somewhat attenuated, thence widening again into a large mammeloid projection before the apex, its lower extremity touching the middle of the termen; above it are a few blackish costal streaklets with two spots of the same before and one at the apex; a small blackish spot lies on the fold at about half the wing-length; cilia tawny reddish cinereous, with darker tessellations around the apex. *Exp. al.* 19–20 mm. *Hindwings* greyish fuscous; cilia pale cinereous, with a shade-line running through them near their base; a dense expanding brush of pale ochreous hair-scales extends along the dilated flexus in the ♂. *Abdomen* fuscous. *Legs* cinereous, the hind tarsi with faint rufous annulations; tibiae in the ♂ very densely clothed with long subochreous scales above.

*Type* ♂ (6031); ♀ (6032 Wlsm. Det. 1908) Orizaba, US. Nat. Mus. [PT. (33943) Mus. Wlsm. BM.]

*Hab.* MEXICO: VERA CRUZ: Orizaba, I.1906 (W. Schaus): OAXACA: Salina Cruz, 1906 (W. Schaus). Three specimens.

A good series of specimens would perhaps prove that *hieroglypta* is only a form of *delphinosema* Wlsm.

### 5. *Olethreutes semicirculana* Wkr. (Tab. VII. fig. 26.)

*Carpocapsa semicirculana* Wkr. Cat. Lp. BM. 28 396 sp. 10 (1863)<sup>1</sup>.

*Type* ♀ (1861:21) BM.

*Hab.* BRITISH HONDURAS (= \*HONDURAS<sup>1</sup>): Limas, near Belize, 1844–5 (D. Dyson).

[The specimen is labelled "Limas," and was presented as from "Limas, Honduras" by H. T. Stainton, in 1861. In the Stainton Collection are specimens labelled "Limas, V., Brockholes 1860" (401201–17); "Belise, W.W. Saunders" (401218–21); and "Colombia, D. Dyson, W. W. Saunders" (401222–3)—these specimens were probably all collected by Dyson and dispersed.

In 'The Substitute,' 1:1856-7 pp. 106-8, is an obituary notice of David Dyson (IV.1823-10. XII.1856), reprinted from 'The Express' of 12 December 1856, and, on p. 146, a proposal that lithographed copies of his portrait by a French artist should be offered to subscribers. It would appear that Dyson was originally a weaver at Oldham, that he went to America in 1843, and collected "through the States, across the Alleghany Mountains, and as far as St. Louis," returning to England in less than twelve months with upward of 18,000 specimens of insects, birds, shells, and plants. "He started for Central America on the 17th of September, 1844, and landed at Belize on the 3rd of November. He remained in Honduras till the latter end of 1845, actively engaged in his vocation, and in the deadly swamps of that country contracted disorders which undermined his constitution, the immediate cause of his return being a sun-stroke at Belize." The British Museum seems to have engaged Dyson to make certain collections, and the chief result of this trip was "the addition of many thousand specimens to the British Museum." In 1846, accompanied by his brother Amos Dyson, he collected for about eleven months in Venezuela for the Museum, "his collection on this occasion including a great variety of humming birds, moths, beetles and shells." After his return to England, Dyson appears to have given his attention chiefly to Conchology, and to have assisted Hugh Cuming, of Gower Street; he succeeded Louis Fraser as curator of the Earl of Derby's collections, at Knowsley. Dyson amassed a private collection of about 20,000 shells, belonging to 10,000 species, and, in 1850, he published at Manchester a 12mo of 96 pp. on 'The Land and Fresh Water Shells of the districts around Manchester.' Mrs. Ives published a further obituary notice, with portrait of Dyson [Proc. Manchester Field Club 1:1900-1 pp. 238-40 Pl. 11 (1905)], from which we learn that "David Dyson became an author, which was the more surprising as to the day of his death he did not know how to read or to write. When the authorities of the British Museum asked him by what method he distinguished natural history objects from each other, he told them that he had a mode of writing of his own, a kind of hieroglyphic marking understood only by himself." !!

It would seem that the full record for Walker's species described as from "Honduras" or from "Limas" should be BRITISH HONDURAS: Limas, near Belize, 1844-5 (*D. Dyson*), but some specimens had been previously acquired from Miller, in 1839—there is no reason to suppose that these were not from Belize. The actual locality "Limas" is probably Lime Walk (Labouring Creek), north-west of Belize.—Drnt.]

## 6. *Olethreutes albimacula* Wlsm.

*Cacocharis albimacula* Wlsm. Pr. Z. Soc. Lond. 1891 503-4, 543 sp. 34 Pf. 41·4<sup>a-b</sup> (1892)<sup>1</sup>: 1897 125 no. 61 sp. 169 (1897)<sup>2</sup>.

Type ♀ (65070, *St. Vincent*); ♂ (62281, *Ceara*) Mus. Wlsm. BM.

*Hab.* AMERICA, C-S-I. Central America—GUATEMALA: SUCHITEPEQUEZ: San Isidro, 1600 ft., 10-23. IX. 1880 (*G. C. Champion*). South America<sup>1-2</sup>—BRAZIL<sup>1-2</sup>: CEARA<sup>2</sup>: Ceara, VIII. 1884 (*J. H. Leech*)<sup>2</sup>—URUGUAY: Monte Video, 1861 (*R. Shield, Stn. Coll.*). West Indies<sup>1-2</sup>—JAMAICA: ST. ANDREW: Constant Spring, 2. I. 1904 (*Wlsm.*); Kingston, ⊕ *Phyllanthus sicca*, ex. IX. 1907 (*Dr. M. Grabham*; 6252-5 Drnt. Det. 1908)—ST. VINCENT (*H. H. Smith*)<sup>1-2</sup>.

### 7. *Olethreutes malachitana* Z.

*Grapholitha* (*Poecilochroma*) *malachitana* Z. Verh. ZB. Ges. Wien 25: 1875 Abh. 292-3 Pf. 9·25 (1875)<sup>1</sup>. *Penthina malachitana* Frnld. Tr. Am. Ent. Soc. 10 33 sp. 200 (1882)<sup>2</sup>. *Olethreutes malachitana* Frnld. Bull. US. Nat. Mus. 52 452 sp. 5044 (1902)<sup>3</sup>; Krft., Smith's Check-List Lp. Bor-Am. 101 sp. 5447 (1903)<sup>4</sup>.

Type ♂, ♀ Mus. Wlsm. (Zell. Coll.) BM.

Hab. AMERICA, N-C-S. United States<sup>1-4</sup>—PENNSYLVANIA<sup>2-3</sup>—NORTH CAROLINA: 1884 (*H. K. Morrison*)—MISSOURI<sup>1-3</sup>—TEXAS<sup>2-3</sup>. ⊕ *Diospyros virginiana* (= *Per-simmon*<sup>2</sup>). Central America—MEXICO: OAXACA: Salina Cruz, 1906 (*W. Schaus*, 6040 Wlsm. Det. 1908). South America (*Prof. Hering*)<sup>1</sup> [?<sup>2-3</sup>].

### 8. *Olethreutes olorina*, sp. n.

*Antennae* yellowish brown. *Palpi* slightly upturned, thickly clothed; brownish ochreous, spotted with fuscous externally; the short terminal joint and the points of the lower scales, at the apex of the median, whitish cinereous. *Head* yellowish brown, the crown between the antennae fuscous. *Thorax* fuscous, mottled with brown and whitish. *Forewings* profusely mottled and streaked with tawny brown and dark fuscous, with paler interspaces of mixed whitish and leaden grey scaling, forming a basal spot, a straight ill-defined fascia before the middle, and a broad space before the termen, somewhat pinkish tinged and containing a transversely streaked, oblique, dark fuscous band, arising from the dorsum before the tornus, narrowed above the middle and again widened to an obtuse apex below the costa, thence produced outward in a recurved beak-like process, tapering downward and forming the narrow anterior edge of a brownish red terminal streak; tornus pale yellowish ochreous, including its cilia; along the costa is a series of pale geminate streaklets, those beyond the middle merging in a bright brownish red streak which communicates at the apex with the terminal streak of the same colour, after being obliquely traversed by two or more leaden grey lines; cilia mixed brownish red and fuscous, sprinkled with whitish. *Exp. al.* 14 mm. *Hindwings* brownish fuscous; cilia greyish, with a dark shade along their middle. *Abdomen* brownish fuscous. *Legs* greyish cinereous, the tarsi touched with fuscous.

Type ♀ (66495); ♂ (67089) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66496) US. Nat. Mus.]

Hab. MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Four specimens.

### 9. *Olethreutes gemmifera*, sp. n.

*Antennae* brown. *Palpi* short, appressed to the face; whitish, brown on their outer sides. *Head* ferruginous. *Thorax* reddish brown, with four small steel-blue spots, one central, two lateral, and one posterior. *Forewings* with the costa slightly arched, apex obtuse, termen convex, scarcely sinuate below the apex, tornus rounded; reddish brown, partially, or almost entirely, suffused with darker brownish fuscous on which are numerous, and somewhat evenly distributed, small shining blue spots; on the costa before the middle are two, and beyond the middle three, parallel, outwardly oblique, silvery white streaklets tipped with blue; the first of the outer series sending out a blue line to the upper end of a rather oblique ocelloid patch below the apex, margined with steel-blue before and behind, and containing about four dark longitudinally transverse lines; cilia pale cinereous, a strong blackish shade-line running through them on their basal half, leaving a slender pale line along their extreme base. *Exp. al.* 11 mm. *Hindwings* brownish fuscous; cilia similarly coloured to those of the forewings. *Abdomen* brownish fuscous. *Legs* greyish, the hind tarsi spotted with white.

Type ♂ (66491); ♀ (66492) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66493) US. Nat. Mus.]

Hab. MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Three specimens.

## CTENOPSEUSTIS Meyr.

=\**PAEDISCA* (nec Tr., Ldr.) Meyr.

Type 1: *Teras obliquana* Wkr. (Meyr. 1885).

\**PAEDISCA* (nec Ldr.) Meyr. Tr. NZ. Inst. 15:1882 58, 59-61 no. 14 sp. 30 (1883). CTENOPSEUSTIS Meyr. NZ. Jr. Sc. 2 348 (I. 1885): Tr. NZ. Inst. 17:1884 146 (V. 1885); Frnld. Gn. Tortr. 45, 61 (1908); Meyr. Tr. NZ. Inst. 43:1910 85 no. 11 sp. 57 (1911): Tr. Ent. Soc. Lond. 1911 681-2 (1912): Lp. Cat. Junk 10 Tortr. 41 (1912).

1. *Ctenopseustis ocelliferana* Wkr.

*Carpocapsa ocelliferana* Wkr. Cat. Lp. BM. 28 408 sp. 33 (1863)<sup>1</sup>.

Type ♂ (1858:6) BM.

*Hab.* AMERICA, C-S. Central America—GUATEMALA: ALTA VERA PAZ: Cubilguitz, 1050 ft., III. 1880 (*G. C. Champion*). South America<sup>1</sup>—COLOMBIA (*Petersen, Zell. Coll.*)—BRAZIL<sup>1</sup>: AMAZONS<sup>1</sup>: Ega (*W. H. Bates*)<sup>1</sup>: PARA: Santarem, X. 1884 (*J. H. Leech*): CEARA: Ceara, VIII. 1884 (*J. H. Leech*): ESPIRITO SANTO: Rio de Espirito Santo, 1872 (*Schmidt*).

2. *Ctenopseustis flavicirrata*, sp. n. (Tab. VII. fig. 27.)

*Antennae* fawn-brown. *Palpi* projecting nearly three times the length of the head beyond it, elongate, triangular; fawn-brown. *Head* and *Thorax* fawn-brown. *Forewings* fawn-brown, with very faint darker specklings along the cell and towards the apex; there is a small dark spot at the end of the cell and the termen is slightly darkened; cilia bright canary-yellow, except at the tornus. *Exp. al.* 22 mm. *Hindwings* pale chestnut-brown, the colour fading out somewhat on the costa and limbus; cilia bright canary-yellow along the termen, tending to greyish along the dorsum. *Abdomen* greyish; anal tuft brown. *Legs* whitish cinereous.

Type ♀ (66498) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*). Unique.

3. *Ctenopseustis unipunctata*, sp. n. (Tab. VII. fig. 28.)

*Antennae* ♂ biciliate 2; brownish at the base, paler beyond. *Palpi* trapezoidal, flattened; brown, thickly speckled with tawny fuscous externally. *Head* and *Thorax* tawny brown. *Forewings* yellowish brown, shaded and speckled transversely with tawny fuscous, giving a shining appearance to the shaded portions; an irregular, spade-shaped, yellowish white spot before the middle of the wing, rests its lower extremity on the fold, its upper extremity, which is narrower, reaching to the upper edge of the cell; cilia bright canary-yellow, tending to brown at the apex and greyish at the tornus. *Exp. al.* 22 mm. *Hindwings* shining, pale fawn, shaded with tawny fuscous on their outer third; cilia paler, with a dark dividing line near their base. *Abdomen* pale fawn, shaded with tawny fuscous posteriorly. *Legs* whitish fawn.

Type ♂ (66504) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: SOLOLA: Panajachel, 5000 ft., 30. XII. 1880 (*G. C. Champion*). Unique.



#### 4. *Ctenopseustis ningorana*, sp. n.

*Antennae* fawn-brown. *Palpi* stretching more than twice the length of the head beyond it, trapezoidal, much flattened laterally; externally thickly speckled with fawn-brown, paler within. *Head* and *Thorax* fawn-brown. *Forewings* fawn-brown, blotched and sprinkled, especially across the middle, with snow-white; a conspicuous triangular snow-white spot on the middle of the costa, with a smaller one, also triangular, half-way to the apex; cilia bright yellow, tending to brown at the apex and greyish at the tornus, some fuscous scaling along the termen at their base. *Exp. al.* 25 mm. *Hindwings* tawny grey; cilia paler. *Abdomen* tawny grey. *Legs* whitish, the tibiae fringed above and beneath.

*Type* ♀ (66502, *Cerro Zunil*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (6034-5 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Orizaba, 1906 (*W. Schaus*)—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000-5000 ft., XI-XII. 1880 (*G. C. Champion*): SOLOLA: Panajachel, 5000 ft., 30. XII. 1880 (*G. C. Champion*). South America—BOLIVIA: LA PAZ: Yungas, 3280 ft. (*Seebold*). Five specimens.

Very similar in appearance to *Epagoge flaviciliana* Wlsm. (*ante* p. 213), but the costal markings are snow-white, not yellowish, and veins FW:7-8 are separate, not stalked; these differences, together with the more excavate termen, render *ningorana* easily distinguishable.

#### DICHRORAMPHA Gn.

= † *DICHRORAMPHA* Oxf-Camb.; *LIPOPTYCHA* Ldr., Busck; = \* *HEMIMENE* (Hb.) Meyr., Busck, Frnld.; = *BALBIS* Wlsm.

Type 1: *Grapholitha plumbagana* Tr. (Frnld. 1908).

DICHRORAMPHA Gn. Ann. Soc. Ent. Er. 14 (2 s. 3: 1845) 185-7 no. 18 (1845): Eur. Micr. Ind. Meth. 51-3 (1845). † *DICHRORAMPHA* Stn. Mn. Br. B. & M. 2 201, 213-5 (1858), 460 no. 12 sp. 1011-19 (1859); Oxf-Camb. Acc. List Br. Lp. 71-2 (1858); Wilk. Br. Tortr. 53, 102-9 no. 12 sp. 1-9 (1859). DICHRORAMPHA Ldr. Wien. Ent. Mts. 3 122, 124, 369-70 no. 24 Pf. 2·13 (1859); Stgr-Wk. Cat. Lp. Eur. 263-4 no. 133 sp. 1271-1300 (1871); Frnld. Tr. Am. Ent. Soc. 10 54-5 sp. 400-4 (1882); Wlsm. Tr. Ent. Soc. Lond. 1891 76-7 Pf. 3·15 (1891); Stgr-Rbl. Cat. Lp. Pal. 2 127-8 no. 267 sp. 2282-2301 (1901); Frnld. Gn. Tortr. 33, 56 (1908).

Type 2: *Phalaena plumbana* Sep. (Meyr. 1895).

DICHRORAMPHA Gn. (B. *LIPOPTYCHA* Ldr.) Ldr. Wien. Ent. Mts. 3 370 (1859); Hnmn. Schm. Deutsch. Tortr. 235-40 no. 303 B. sp. 428-36 (1863); Stgr-Wk. Cat. Lp. Eur. 264 no. 133 B. sp. 1291-1300 (1871). *LIPOPTYCHA* Meyr. HB. Br. Lp. 454, 503-4 no. 19 sp. 1-2 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 128-9 no. 268 sp. 2302-10 (1901); Frnld. Jr. NY. Ent. Soc. 9 51 (1901); Bull. US. Nat. Mus. 52 471, sp. 5293 (1902); Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5709 (1903); Bull. Am. Mus. NH. 23 160-1 Pf. 8·11 (1907); Meyr. Ent. Mo. Mag. 48 36 (1912).

Type 3: *Phalaena Tortrix petiverella* L. (Frnld. 1908).

\**HEMIMENE* [Hb. (p.) Verz. Schm. 377-8 sp. 3628, 3636 (1826). *PSEUDOTOMIA* Stph. (B. †*HEUSIMENE* [†*HEMIMENE*] Hb.) Stph. Ill. Br. Ent. Haust. 4 99-102 no. 283 B. sp. 5-6 (1834), 418 no. 1113 sp. 3628, 3636 (1835)]. \**HEMIMENE* Meyr. HB. Br. Lp. 454, 499-503 no. 18 sp. 1-11 tf. 501 (1895); Frnld. Bull. US. Nat. Mus. 52 470 sp. 5288-92 (1902); Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5704-8 (1903); Can. Ent. 37 254 (1905); Busck Pr. Biol. Soc. Wash. 19 173-82 (1906); Krft. Bull. Am. Mus. NH. 23 159-60 Pf. 8·5 (1907); Frnld. Gn. Tortr. 8, 56 (1908).

Stephens, List Br. An. BM. 10 Lp. 58-60 sp. 1-2 (1852) adopted the genus *Dichrorampha* Gn. for *petiverella* L. and *sequana* Hb., definitely sinking this part of *Hemimene* Hb. as synonymous with Guenée's genus, but retaining *Hemimene* Hb. in a subgeneric sense for *populana* F. (p. 47-8), *argyrana* Hb. (p. 50), *compositella* F. (p. 56-7) and *amplana* Hb. (p. 92); Fernald (Gn. Tortr. 8, 56) cites *petiverella* L. as the Type of *Hemimene*—but Walsingham & Durrant [Ent. Mo. Mag. 37 190 (1901)] had already cited *populana* F. as the Type of *HEMIMENE* Hb., following Stephens' restriction of 1852.

[nec †*HEUSIMENE* (†*HEMIMENE* Hb.) Stph. Ill. Br. Ent. Haust. 4 96-7 no. 282 sp. 1 (1834), 418 sp. 3631 (1835). *HEUSIMENE* Stph. List Br. An. BM. 10 Lp. 52 no. 36 sp. 1 (1852); Wlsm. & Drnt. Ent. Mo. Mag. 37 189-90 (1901)—*fimbriana* Hw. (*Pammene* Hb.).]

[nec \**PSEUDOTOMIA* Stph. (B. †*HEUSIMENE* [†*HEMIMENE*] Hb.) Stph. Ill. Br. Ent. Haust. 4 99-102 no. 283 sp. 15 (1834), 418 no. 1113 sp. 3633 (1835). *HALONOTA* Stph. (c. *HEMIMENE* Hb.) Stph. List Br. An. BM. 10 Lp. 47-8 no. 32 c. sp. 11-13 (1852); Wlsm. & Drnt. Ent. Mo. Mag. 37 190 (1901)—*populana* F. (*Pammene* Hb.).]

[nec \**COCCYX* Tr. (a. *HEMIMENE* Hb.) Stph. List Br. An. BM. 10 Lp. 50 no. 35 a. sp. 1-5 (1852)—*argyrana* Hb. (*Pammene* Hb.).]

[nec \**EPHIPPIPHORA* Dp. (d. *HEMIMENE* Hb.) Stph. List Br. An. BM. 10 Lp. 56-7 no. 41 d. sp. 7-10 (1852)—*compositella* F. (= *gundianana* Hb. Verz.) (*Laspeyresia* Hb.).]

[nec \**CARPOCAPSA* Tr. (c. *HEMIMENE* Hb.) Stph. List Br. An. BM. 10 Lp. 92 no. 39 c. sp. 4 (1852)—*amplana* Hb. (*Laspeyresia* Hb.).]

Type 4: *Carpocapsa assumptana* Wkr. (Wlsm. 1897).

BALBIS Wlsm. Pr. Z. Soc. Lond. 1897 128-9 no. 67 sp. 176-80 (1897); Busck Pr. Biol. Soc. Wash. 19 173 (1906).

Type 5: *Coccyx bugnionana* Dp. (Busck 1906).

\**LIPOPTYCHA* (Ldr.) Busck Pr. Biol. Soc. Wash. 19 174-6, 182 (1906); Frnld. Gn. Tortr. 38, 56 (1908).

# 1. *Dichrorampha sinuata*, sp. n. (Tab. VII. fig. 29.)

*Antennae* ♀ cinereous, barred above with fuscous throughout. *Palpi* porrect, thickly clothed with long scales, hiding the terminal joint and reaching more than twice the length of the head beyond it; greyish fuscous, with a reddish ochreous streak on their outer sides. *Head* greyish fuscous, speckled with reddish ochreous; with a slight projecting frontal tuft. *Thorax* shining, greyish fuscous. *Forewings* narrow at the base, expanding outward, the costa slightly arched before the middle, the termen sinuate; dark olive-brown, shaded with leaden grey toward the base, with shining, leaden grey, wavy lines crossing the middle and outer half of the wing; a pale dorsal patch, rosy pink divided by three leaden grey lines, forms the base of a transverse, waved, reduplicated, leaden grey fascia, much bowed outward in the

middle; an almost parallel leaden grey band beyond it forms a large shining ocelloid patch above the tornus, leaving the dark olive-brown ground-colour conspicuous between them on the dorsum; along the costa is a series of short, oblique, rosy pink, reduplicated streaks, ending in leaden grey lines; cilia shining, metallic rosy grey, some black spots preceding them along the margin and at the apex. *Exp. al.* 22 mm. *Hindwings* dark brown; cilia shining, greyish. *Abdomen* dark grey. *Legs* greyish fuscous, banded with ochreous, especially on the tarsal joints.

*Type* ♀ (66412) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

## 2. *Dichrorampha vinana*, sp. n. (Tab. VII. fig. 30.)

*Antennae* pubescent, somewhat serrate towards the apex; brownish fuscous. *Palpi* projecting more than the length of the head beyond it; tawny fuscous at the sides, paler within. *Head* tawny fuscous. *Thorax* tawny fuscous. *Forewings* tawny vinous on the basal half, merging into ferruginous on the outer half of the dorsum and costa, and into tawny fuscous from the outer end of the cell to below the apex and to the termen as far as the tornus; slightly before the middle of the dorsum are some paler vinous streaks, divided by brownish fuscous lines which bend outwards soon after leaving the margin; along the costa is a series of oblique fuscous streaklets, terminating in leaden grey; cilia shining, greyish, with some dark mottling along their base. *Exp. al.* 21 mm. *Hindwings* pale cinereous; cilia whitish cinereous, with a dark fuscous shade along their base. *Abdomen* cinereous. *Legs* pale cinereous.

*Type* ♂ (66413) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

## 3. *Dichrorampha pallidula*, sp. n.

*Antennae* greyish fuscous. *Palpi* strongly clothed, projecting more than the length of the head beyond it; whitish at the base, fringed and tipped with greyish fuscous. *Head* whitish cinereous. *Thorax* greyish fuscous, the tegulae pale cinereous. *Forewings* without a costal fold in the ♂, slightly indented below the apex; cream whitish at the base, in some specimens shading to very pale ochreous on the outer half of the costa and about the termen; shaded with greyish fuscous on the dorsal half of the wing, and in a series of short oblique costal streaks, from between which some oblique leaden grey lines arise beyond the middle, one bending back to the tornus parallel with the outer margin, another crossing to the subapical indentation; a series of four black spots on the lower half of the termen, and one immediately within the apex, there is also an indication of an angulated excrescence from the dorsal shade terminating before the middle of the wing; cilia shining, pale aeneous, with a shining pale lilac line along their base. *Exp. al.* 11–13.5 mm. *Hindwings* pale brownish grey; cilia somewhat lighter, with a dark line along their base. *Abdomen* greyish fuscous. *Legs* whitish, the tarsal joint slightly shaded.

*Type* ♂ (66414); ♀ (66415) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66419–20) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Seven specimens.

## 4. *Dichrorampha agraea*, sp. n.

*Antennae* greyish. *Palpi* whitish at the base, fringed with greyish fuscous towards the apex. *Head* greyish; face white. *Thorax* greyish fuscous. *Forewings* olivaceous fuscous, with some paler mottlings, especially towards the base; a series of oblique whitish costal streaks, three pairs before the middle, of which the outer two emit bright steel-blue bands which are recurved on the middle of the wing, but somewhat obliterated towards the dorsum; five beyond the middle, of which the first, third, and fifth also emit short steel-blue lines, also a small one below the apex at the marginal indentation; a lilac patch indicates the ocelloid spot, in which are three black streaks from the lower half of the termen; the margin is very narrowly outlined with black at the base of the shining lilac cilia; underside brilliantly iridescent in certain lights. *Exp. al.* 13 mm. *Hindwings* brownish fuscous, paler toward the base and centre,

brilliantly iridescent above and beneath in certain lights; a dark line along the base of the dark grey cilia. *Abdomen* greyish fuscous. *Legs* greyish externally, white on their inner sides, with three white tarsal annulations; spurs white.

*Type* ♂ (66423) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66424) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*); Omilteme, 8000 ft., VII. (*H. H. Smith*). Two specimens.

### 5. *Dichrorampha leopardana* Busck.

= \*†*incarnana* (*nec* Clms.) Krft.

*Hemimene leopardana* Busck Pr. Biol. Soc. Wash. 19 177, 181 (1906)<sup>1</sup>. \**Hemimene incarnana* Krft. Bull. Am. Mus. NH. 23 167 Pf. 8·14 (1907)<sup>2</sup>.

*Type* ♂ (10135) US. Nat. Mus.

*Hab.* AMERICA, N-C. United States<sup>1</sup>—MARYLAND<sup>1</sup>: Hyattsville (*A. Busck*)<sup>1</sup>—PENNSYLVANIA<sup>1</sup>: Pittsburg (*H. Engel*)<sup>1</sup>, 29. V. 1906. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*).

It is difficult to understand how Kearfott could have named the insect he figured "*incarnana* Clemens"—it does not agree with the description of *Halonota incanana* Clms., and some error in determination has obviously occurred.

### 6. *Dichrorampha eulepidana*, sp. n.

*Antennae* fuscous. *Palpi* yellowish white at their base, greyish fuscous beyond. *Head* and *Thorax* brownish fuscous. *Forewings* shining, brownish, with a slight ochreous tinge on their lower half; a series of about nine, oblique, pale straw-coloured costal streaklets, of which two before the middle, and others beyond it, emit shining steel-blue lines—the first of these terminates at the apex of a conspicuous, elongate-ovate, medio-dorsal, straw-coloured patch, placed a little obliquely; the second, tending outward, reverts to the tornus, much dilated on its lower half; the third crosses before the apex, reaching the slight subapical indentation which is marked by a small yellowish spot, four black spots lying on the termen below it; cilia shining, lilac. *Exp. al.* 9 mm. *Hindwings* brownish, with a strong blue and green iridescence, in certain lights, which extends to the pale blue-grey cilia. *Abdomen* steel-grey. *Legs* shining, whitish, with grey-banded tarsal joints.

*Type* ♀ (66426) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66427) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

### 7. *Dichrorampha panterpes*, sp. n.

*Antennae* brownish grey. *Palpi* whitish ochreous; the terminal joint short, greyish. *Head* brownish grey. *Thorax* brownish fuscous. *Forewings* stone-grey, with minute, transverse, brownish fuscous striae; a short straight basal patch, scarcely reaching one-fourth, is brownish fuscous, and on the middle of the costa is a small cloudy spot of the same; from a little beyond this, a slender blue streak runs obliquely outward from the costa to the subapical incision on the termen, enclosing in the space above it two pale ochreous costal streaks before the apex, the outer one of which forms an oblique band, followed by a greyish fuscous line at the base of the apical cilia; the termen from the tornus to the subapical incision is marked by a series of six black quadrate spots, separated from each other by golden yellow lines, a slender, pale violet, metallic line separating the series from the greyish cilia which are also slightly tinged with violet—about the end of the cell is a group of rather inconspicuous longitudinal blackish streaklets; the underside shows very plainly the six black marginal spots and the comb-like arrangement of yellow lines which separates them. *Exp. al.* 9–10 mm. *Hindwings* brownish fuscous, with two or three, slightly paler, small and inconspicuous, dorsal spots; cilia paler, a narrow dark basal shade running

through them. *Abdomen* brownish fuscous, transversely banded with stone-grey. *Legs* greyish, the tarsal joints barred with greyish fuscous.

*Type* ♂ (66428); ♀ (66429) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66432-3) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Seven specimens.

### 8. *Dichrorampha aztecana*, sp. n.

*Antennae* brownish fuscous. *Palpi* white on their basal half, the outer half brownish fuscous. *Head* and *Thorax* brownish fuscous; face white. *Forewings*, ♂ with a narrow costal fold reaching to the middle; dark brownish fuscous, with some slight paler mottling, by which an obliquely elevated and divided dorsal patch is so faintly indicated as to be difficult to observe, there are also a few darker fuscous spots between the faint steel-bluish lines, which, emanating obliquely outward from the costa, are bent downward as they become almost blended with the ground-colour across the wing—of these the more noticeable are two, which emanate from the first and third, respectively, of a series of five, outwardly oblique, silvery white, costal streaklets beyond the middle, the first, bent downward, forms a double inner margin to the ocelloid tornal patch, in which are three black spots on the lower half of the termen; the second running to the subapical indentation in a black apical and terminal line, but receiving on its way the bluish tips of the two outer costal streaklets; cilia shining, silvery grey. *Exp. al.* 9 mm. *Hindwings* brown; cilia hoary greyish, with a dark shade-line along their base and around the apex, another beyond their middle. *Abdomen* bronzy brownish fuscous. *Legs* grey, with whitish tips to tibiae and tarsi.

*Type* ♂ (66435); ♀ (66436) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65370) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*). Three specimens.

### 9. *Dichrorampha heptagramma*, sp. n. (Tab. VII. fig. 31.)

*Antennae* minutely ciliate; greyish fuscous. *Palpi* erect, thinly clothed, the very short terminal joint porrect; cinereous, shaded with fuscous. *Head* and *Thorax* greyish fuscous. *Forewings* without costal fold; brownish fuscous, with a slight purplish tinge, a series of pale cinereous, geminate, costal strigulae are more oblique before than beyond the middle, and are not continued to the apex, the last pair, at one-seventh from the apex, emitting a straight steel-blue streak, which joins the apex of a similar but very oblique streak emitted from the third of the preceding pairs, the two intermediate pairs being also shortly tipped with blue; similar blue streaks, parallel to the oblique one, proceed from two of the other costal geminations before the middle, and, from their extremities run two or three short dark lines to the angle formed by those beyond them, below which the ocelloid patch, inwardly bordered by pale greyish cinereous, contains seven, short, parallel black dashes of uneven length, one above the other, not reaching the termen, where there is a pale cinereous line along the base of the brownish fuscous cilia. *Exp. al.* 14 mm. *Hindwings* brownish fuscous; cilia tipped with pale cinereous. *Abdomen* greyish fuscous. *Legs* greyish cinereous.

*Type* ♂ (66425) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

The only specimen of this very distinct species is unfortunately in poor condition.

### CYDIA Hb.

= LASPEYRESIA Hb.; = § *ERMINEA* Kby-Spence (Busck); = *CARPOCAPSA* Tr.; = §† *GRAPHOLITA* Tr. († *GRAPHOLITHA* Tr.); = *EUSPILA* Stph.; = *ASPILA* Stph.; = *SELANIA* Stph.; = *EPHIPPIPHORA* Dp.; = *OPADIA* Gn.; = *ENDOPISA* Gn.; = *STIGMONOTA* Gn.; = *ORCHEMIA* Gn.; = *CERATA* Stph.;



= *COPTOLOMA* Ldr.; = *MELISSOPUS* Riley († *MELLISOPUS* Frnld.; † *MELLIOPUS* Pkrd.; † *MELLISSOPUS* Frnld.); †\* *ERNARMONIA* (nec Hb.) Kby.; = *LEPTARTHRA* Lwr.; =\* *ENARMONIA* (nec Hb.) Frnld.; = § *CROBYLOPHORA* Knl.

Type 1: *Phalaena Tinea pomonella* L. (Stph. 1834; Wlsm. 1897).

CYDIA Hb. Verz. Schm. 375 sp. 3592-4 (1826). *CARPOCAPSA* Tr. (A. CYDIA Hb.) Stph. Ill. Br. Ent. Haust. 4 119-20 no. 289 A. sp. 1-4 (1834), 418 no. 1107 sp. 3592-3 (1835). *CARPOCAPSA* Tr. (b. CYDIA Hb.) Stph. List. Br. An. BM. 10 Lp. 54 no. 39 b. sp. 3 (1852). CYDIA Wlsm. Tr. Ent. Soc. Lond. 1897 58-9 Pf. 3·24 (1897): Pr. Z. Soc. Lond. 1897 130-1 no. 69 sp. 182 (1897): Ann-Mag. NH. (7 s.) 6 435 sp. 1181-2 (1900); Frnld. Bull. US. Nat. Mus. 52 471 sp. 5296-8 (1902); Wlsm. Pr. Z. Soc. Lond. 1907 1006 no. 69 sp. 136 (1908). Stephens (Ill. 4 119) wrote thus of *Carpocapsa* Tr.:—"This genus requires considerable revision; the three first species" [*i. e.* 1. *pomonella* L.; 2. *splendana* Hb.; 3. *grossana* Hw.] "form the true *Carpocapsae* of Treitschke—*Cydia* of Hübner—the remainder are mostly included in the genus *Grapholitha* of Treitschke, and constitute other genera of Hübner, as indicated hereafter."

The only species common to Hübner and Stephens, and which was therefore regarded by Stephens as the Type of *Cydia* Hb. is *pomonella* L. Stephens' statement can have but one meaning—*Carpocapsa* Tr. (1829) = *Cydia* Hb. (1826) Type: *pomonella* L., with which *splendana* Hb. and *grossana* Hw. are alone congeneric.

[nec \**GRAPHOLITA* Stph. (b. CYDIA Hb.) Stph. List Br. An. BM. 10 Lp. 93 no. 45 b. (1852). \*CYDIA Meyr. HB. Br. Lp. 454, 482-8 no. 14 sp. 1-18 (1895); Krft., Smith's Check-List Lp. Bor. Am. 102-3 sp. 5573-5617 (1903); Frnld. Gn. Tortr. 6, 56 (1908)—*aspidiscana* Hb. (*Eucosma* Hb.).]

§ " *ERMINEA* Kirby & Spence Intr. Ent. 3 123 (1826) " teste Busck Jr. NY. Ent. Soc. 11 107-8, 110-11 (1903).

The whole passage in Kirby and Spence reads as follows:—"In a figure given by Reaumur of the under side of the head of another lepidopterous larva (*Erminea Pomonella*), the maxillae consist of a single joint and appear to be crowned by chelate palpi (Reaum. ii. t. 40 f. 4): a circumstance which is also observable in that of the common stag-beetle (*Lucanus parallelopipedus*), the weevil of the water-hemlock (*Lixus paraplecticus*), and other insects." !!!

[nec *TINEA* L. (ERMINEAE Hw.) Hw. Prodr. Lp. Br. 35 (1802). *ERMINEA* Hw. Lp. Br. 512 no. 27 sp. 1-2 (1811), 513-18 sp. 2-19 (1828)—Type: *euonymellus* L. († *evonymè* Hw.) (*Hyponomeuta* Ltr.).]

*CARPOCAPSA* Tr. Schm. Eur. 7 231 no. 124 (1829): 8 160-7 no. 124 sp. 1-4 (1830); Crt. Guide Br. Ins. 170 no. 957 sp. 1-24 (1831): Br. Ent. 8 expl. Pl. 352 sp. 1-24 (1831); Eversm. Enum. Lp. Volg-Ural. 19 (1834); Stph. Ill. Br. Ent. Haust. 4 119-24 no. 289 sp. 1-16 Pf. 34·2 (1834), 418 no. 1107 sp. 3592-3 (1835); Dp. Ann. Soc. Ent. Fr. 3:1834 446 no. 11 (1834): HN. Lp. Fr. 9 21-2 no. 11 (1834), 246-62 no. 11 sp. 1208-13 Pf. 248·2-8 (1835); Sdf. Bull. Soc. Imp. Nat. Mosc. 10 92, 128 no. 128 (1837); Crt. Guide Br. Ins. (2 ed.) 199 no. 957 sp. 1-5 (1837); Wstwd. Syn. Gen. Br. Ins. 108 (1840); Wstwd-Humph. Br. Moths 2 135-8 sp. 1-19 Pf. 86·2-18 (1844); Dp. Cat. Meth. Lp. Eur. 303-4 no. 23 (1845); Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 181 no. 14 (1845): Eur. Micr. Ind. Meth. 47 no. 14 (1845); Z. Isis 39:1846 234-5 sp. 1-3 (1846); Tngstr. Not. Sällsk. Fn-Fl. Fenn. Förh. 1 82-3

sp. 1-5 (1847); Hdnrch. Lp. Eur. Cat. Meth. 67-8 no. 9 sp. 259-66 (1851). *TORTRIX* L. (28. *CARPOCAPSA* Tr.) HS. SB. Schm. Eur. 4 133, 251-2 no. 28 sp. 348-54 (1851): 6 Syst. Lp. Eur. 45 no. 28 sp. 779-85 (1855). *CARPOCAPSA* Stph. List Br. An. BM. 10 Lp. 53-4, 92 no. 39 sp. 1-4 (1852); Lah. Fn. Suisse Lp-Tortr. 99-100 (1858); Stn. Mn. Br. B. & M. 2 250, 252-3 tf., 463 no. 2 sp. 1136-40 (1859); Wlk. Br. Tortr. 227, 232-8 no. 2 sp. 1-5 Pf. 2·4, 4·4 (1859); Ldr. Wien. Ent. Mts. 3 124, 368-9 no. 23 Pf. 2·8 (1859); Stgr-Wk. Cat. Lp. Eur. 104 no. 81 sp. 1104-7 (1861). *GRAPHOLITHA* Tr. (M. *CARPOCAPSA* Tr.) Hnmn. Schm. Deutsch. Tortr. 100, 193-6 no. 302 M. sp. 349-53, Tbl. 2, 31-6 (1863). *CARPOCAPSA* Wkr. Cat. Lp. BM. 27 280-1 no. 38 sp. 1-4 (1863): 28 394-412 sp. 5-42 (1863): 30 992 (1864): 35 1796-8 (1866); Stgr-Wk. Cat. Lp. Eur. 258-9 no. 124 sp. 1181-5 (1871); Wlsm. Ill. Typ. Lp-Het. BM. 4 pp. xi, 70, 78 Pf. 76·8 (1879); Frnld. Tr. Am. Ent. Soc. 10 53-4 sp. 395-7 (1882); Slngrlnd. Cornell Univ. Agr. Exp. Stn. Ent. Div. Bull. 142 3-69 tf. 126-146 Pl. [1-3] (1898); Ckrl. N-Mex. Coll. Agr. Bull. 25 47 (1898); Stgr-Rbl. Cat. Lp. Pal. 2 125-6 no. 264 sp. 2257-61 (1901); Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5712-5 (1903); Busck Pr. Ent. Soc. Wash. 5 235-6 (1903); Jr. NY. Ent. Soc. 11 106-11 (1903); Frnld. Gn. Tortr. 6, 19, 58 (1908); Knl., Splr. Schm. Eur. 2 289 no. 26 sp. 1-6 Pf. 86·54-6, ·84 (1910)—Type: *pomonella* L. (Crt. 1831; Stph. 1834). \*†*ERNARMONIA* Kby., Lloyd's NH. Lp. 5 280-1 Pf. 154·3-5 (1897).

Type 2: *Tortrix corollana* Hb. (Meyr. 1895).

*LASPEYRESIA* Hb. Verz. Schm. 381 sp. 3675-7 (1826); Meyr. HB. Br. Lp. 454, 508-15 no. 22 sp. 1-22 (1895); Wlsm. Tr. Ent. Soc. Lond. 1897 58 Pf. 3·23 (1897); Ann-Mag. NH. (7 s.) 6 429-35 (1900); Ent. Mo. Mag. 39 209-11 (1903); Meyr. Jr. Bomb. NH. Soc. 17 734-5 (1907): 18 143-8 (1907); Wlsm. Pr. Z. Soc. Lond. 1907 1005 no. 68 sp. 134-5 (1908); Frnld. Gn. Tortr. 10, 57 (1908); Meyr. Pr. Z. Soc. Lond. 1908 721-2 (1908); Tr. Ent. Soc. Lond. 1909 14 (1909); Rec. Ind. Mus. 5 219 (1910); Ann. S-Afr. Mus. 5 412 (1910); Ann. Transv. Mus. 2 9-10 Pf. 3·9 (1910); Knl., Splr. Schm. Eur. 2 290-4 no. 27 sp. 1-50 Pf. 86·57-79 (1910); Meyr. Tr. NZ. Inst. 43:1910 89-90 no. 18 sp. 87 (1911); Pr. Linn. Soc. NSW. 36:1911 225, 286-93, 295-6 no. 67 sp. 420-37, 441-2 (1911); Tr. Linn. Soc. Lond. (2 s. Zool.) 14 271 sp. 15 (1911); Exot. Micr. 1 64 (1912); Jr. Bomb. NH. Soc. 21 875-7 (1912); Ann. Transv. Mus. 3 278-80 (1913); Tr. Ent. Soc. Lond. 1913 173-4 (1913).

Type 3: *Pyralis dorsana* F. (= *lunulana* Hb., Tr., Gn.; Ldr. 1859; Wlsm. 1895; Frnld. 1898).

*STIGMONOTA* Gn. = §†*GRAPHOLITHA* Tr. Schm. Eur. 7 232 no. 126 (1829). ‡§*GRAPHOLITHA* Tr. Schm. Eur. 8 203-30 no. 127 sp. 1-21 (1830). †*GRAPHOLITHA* Crt. Guide Br. Ins. 169 no. 953 sp. 1-14 (1831). *GRAPHOLITHA* Eversm. Enum. Lp. Volg-Ural. 20 (1834); Sdf. Bull. Soc. Imp. Nat. Mosc. 10 93, 128 no. 131 (1837); Crt. Guide Br. Ins. (2 ed.) 197-8 no. 953 sp. 1-14 (1837); Ztst. Ins. Lapp. 891, 986-7 no. 83 (1840); Eversm. Fn. Lp. Volg-Ural. 510-15 no. 120 sp. 1-14 (1844); Z. Isis 39:1846 239-57 sp. 1-37 (1846): 40:1847 732-8 sp. 294-9 (1847); Tgstr. Not. Sällsk. Fn-Fl. Fenn. Förh. 1 86-90 sp. 1-22 (1847). *TORTRIX* L. (29 *GRAPHOLITHA* Tr.) HS. SB. Schm. Eur. 4 133, 253-75 no. 29 sp. 355-426 (1851): 6 Syst. Lp. Eur. 45 no. 29 sp. 786-857 (1855). *GRAPHOLITHA* Ldr. Wien. Ent. Mts. 3 124, 330-46 no. 19 (1859); Stgr-Wk. Cat. Lp. Eur. 100-4 no. 75 sp. 891-1100 (1861); Hnmn. Schm. Deutsch. Tortr. 97-229 no. 302 sp. 172-415, Tbl. 2, 15-37 no. 302 (1863); Stgr-Wk.

Cat. Lp. Eur. 252-8 no. 123 sp. 1031-1180 (1871). *GRAPHOLITHA* Tr. (*GRAPHOLITHA* Ldr.) Ldr. Wien. Ent. Mts. 3 337-46 no. 19 C. (1859); Stgr-Wk. Cat. Lp. Eur. 102-4 no. 75 c. sp. 967-1100 (1861); Hnmn. Schm. Deutsch. Tortr. 100, 177-93 no. 302 L. sp. 315-48, Tbl. 31-6 (1863). *GRAPHOLITHA* Wlsm. Ill. Typ. Lp-Het. BM. 4 pp. xi, 65-8, 77 Pf. 75·5 - 76·1 (1879); Frnld. Tr. Am. Ent. Soc. 10 52-3 sp. 380-93 (1882); Wlsm. Tr. Ent. Soc. Lond. 1895 517 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 120-3 no. 261 sp. 2155-224 (1901); Frnld. Gn. Tortr. 19-20, 57 (1908)—Type: *dorsana* F. (= *lunulana* Hb., Tr.; Ldr. 1859; Wlsm. 1895). *STIGMONOTA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 182-4 no. 17 (1845); Eur. Micr. Ind. Meth. 48-50 no. 17 (1845); Dbld. List Br. Lp. 26 (1849):25 (1859); Stn. Mn. Br. B. & M. 2 237, 244-6 tf., 462-3 no. 7 sp. 1106-14 (1859); Wilk. Br. Tortr. 183, 204-11 no. 7 sp. 1-9 (1859); Meyr. Pr. Linn. Soc. NSW. 6 633, 635, 652-6 no. 9 sp. 1-5 (1881); South Ent. Syst. List Br. Lp. 26-7 (1884); Frnld. Gn. Tortr. 32, 57 (1908)—Type: *dorsana* F. (= *lunulana* S-D., Gn.; Frnld. 1908). \**ENARMONIA* (nec Hb.) Frnld. Bull. US. Nat. Mus. 52 469-70 sp. 5268-86 (1902); Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5683-702 (1903); Can. Ent. 36 137-8 (1904); Pr. US. Nat. Mus. 28 362 (1905); Can. Ent. 37 254 (1905); Bull. Am. Mus. NH. 23 159 (1907); Tr. Am. Ent. Soc. 33 57-66 (1907); Can. Ent. 39 1-2, 127-8, 154-5 (1907).

§ *Grapholita* Tr. (*Grapholitha* Tr.) is too close to *GRAPTOLITHA* Hb. Verz. Schm. 242-3 sp. 2413-5 (1825) *Lep.*, and confusion has been already caused *vide* Agassiz Nom. Zool. Lp. 32, Ind. Univ. 167, 480 (1844-8); Scdr. Nom. Zool. 2 135 (1882).

[nec \*§ *GRAPHOLITHA* (Tr.) Dp. Ann. Soc. Ent. Fr. 3:1834 446 no. 12 (1834); HN. Lp. Fr. 9 22 no. 12 (1834), 263-303 no. 12 sp. 1214-31 Pf. 249·1 - 251·2 (1835); Cat. Meth. Lp. Eur. 304-6 no. 24 (1845); Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 171-2 no. 3 (1845); Eur. Micr. Ind. Meth. 37-8 no. 3 (1845); Hdnrch. Lp. Eur. Cat. Meth. 69-70 no. 13 sp. 384-477 (1851); Wlsm. Tr. Ent. Soc. Lond. 1895 517 (1895)—*nisella* Cl. (= *petrana* Dp.) (*Eucosma* Hb.).]

[nec \*§ *GRAPHOLITA* Stph. List Br. An. BM. 10 Lp. 61-3 no. 45 sp. 1-13 (1852); Stn. Mn. Br. B. & M. 2 250, 253-5 tff., 463 no. 3 sp. 1141-8 (1859); Wilk. Br. Tortr. 227, 238-45 no. 3 sp. 1-8 Pf. 4·5 (1859)—*hypericana* Hb. (*Eucosma* Hb.).]

Type 4: *Tinea compositella* F. (Frnld. 1908).

*PSEUDOTOMIA* Stph. (D. *EUSPILA* Stph.) Stph. Ill. Br. Ent. Haust. 4 103-4 no. 283 D. sp. 18-20 Pf. 37·2 (1834); Frnld. Gn. Tortr. 27, 57 (1908).

Type 5: *Coccyx janthinana* Dp. (= \**lediana* Stph.; Stph. 1852).

*PSEUDOTOMIA* Stph. (E. *ASPILA* Stph.) Stph. Ill. Br. Ent. Haust. 4 104 no. 283 E. sp. 21-2 (1834). *SEMASIA* Stph. (b. *ASPILA* Stph.) Stph. List Br. An. BM. 10 Lp. 49 no. 34 b. sp. 2-3 (1852). *ASPILA* Frnld. Gn. Tortr. 27, 58 (1908). *COPTOLOMA* Ldr. Wien. Ent. Mts. 3 124, 370 no. 25 Pf. 2·11 (1859); Stgr-Wk. Cat. Lp. Eur. 104 no. 83 sp. 1125 (1861); Wkr. Cat. Lp. BM. 27 283 no. 40 sp. 1 (1863). § *GRAPHOLITHA* Tr. (N. *COPTOLOMA* Ldr.) Hnmn. Schm. Deutsch. Tortr. 100, 196-7 no. 302 N. sp. 354, Tbl. 2, 31-3 (1863). *COPTOLOMA* Stgr-Wk. Cat. Lp. Eur. 259 no. 125 sp. 1186 (1871); Frnld. Gn. Tortr. 38, 58 (1908)—Type: *janthinana* Dp. (Ldr. 1859).

[nec \**EPHIPPIPHORA* Dp. (c. *ASPILA* Stph.) Stph. List Br. An. BM. 10 Lp. 56 no. 41 c. sp. 5-6 (1852)—*nitidana* F. (*Pammene* Hb.).]

Type 6: *Carpocapsa leplastrierana* Crt. (*†leplastriana* Crt.; Stph. 1852).

*CARPOCAPSA* Tr. (C. SELANIA Stph.) Stph. Ill. Br. Ent. Haust. 4 121-2 no. 289 C. sp. 9-11 (1834).  
*EPHIPPIPHORA* Dp. (d. SELANIA Stph.) Stph. List Br. An. BM. 10 Lp. 57-8 no. 41 d. sp. 11-15 (1852). SELANIA Frnld. Gn. Tortr. 27, 57 (1908).

Type 7: [*Phalaena Tinea*] *jungiella* Cl. (= *\*dorsana* Dp.; Dp. 1834).

*EPHIPPIPHORA* Dp. Ann. Soc. Ent. Fr. 3:1834 446 no. 13 (1834): HN. Lp. Fr. 9 22 no. 13 (1834), 304-28 no. 13 sp. 1232-43 Pf. 251·3 - 252·5 (1835): Cat. Meth. Lp. Eur. 306-7 no. 25 (1845); Stph. List Br. An. BM. 10 Lp. 55-8 no. 41 sp. 1-15 (1852); Frnld. Gn. Tortr. 28, 57 (1908).

[*nec \*EPHIPPIPHORA* (Dp.) Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 176-7 no. 8 (1845): Eur. Micr. Ind. Meth. 42-3 no. 8 (1845); Dbld. Syn. List Br. Lp. 25 (1849); South Ent. Syn. List Br. Lp. 25-6 (1884)—*populana* F. (= *ephippana* Dp., Gn.) (*Pammene* Hb.).]

[*nec \*EPHIPPIPHORA* (Dp.) Stn. Mn. Br. B. & M. 2 237, 242-3 tf., 462 no. 6 sp. 1102-5 (1859); Wilk. Br. Tortr. 183, 200-4 no. 6 sp. 1-4 Pf. 4·2 (1859)—*regiana* Z. (= *\*trauniana* Dp.) (*Pammene* Hb.).]

Type 8: *Grapholitha funebrana* Tr. (Gn. 1845).

*OPADIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 182 no. 15 (1845): Eur. Micr. Ind. Meth. 48 no. 15 (1845); Dbld. List Br. Lp. 25 (1849): 24 (1859); Stph. List Br. An. BM. 10 Lp. 54 no. 40 sp. 1 (1852); South Ent. Syn. List Br. Lp. 26 (1884); Frnld. Gn. Tortr. 32, 57 (1908).

Type 9: *Pyralis nigricana* F., Stph. (Dbld. 1849; Stph. 1852; Frnld. 1908).

*ENDOPISA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 182 no. 16 (1845): Eur. Micr. Ind. Meth. 48 no. 16 (1845); Dbld. List Br. Lp. 26 (1849): 25 (1859); Stph. List Br. An. BM. 10 Lp. 54-5 no. 41 sp. 1-2 (1852); Stn. Mn. Br. B. & M. 2 250-1, 463 no. 1 sp. 1130-5 (1859); Wilk. Br. Tortr. 227-32 no. 1 sp. 1-6 Pf. 4·3 (1859); South Ent. Syn. List Br. Lp. 26 (1884); Frnld. Gn. Tortr. 32, 57 (1908).

Type 10: *Orchemia gallicana* Gn. (Gn. 1845; Wlsm. 1903).

*ORCHEMIA* Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3:1845) 192 no. 4 (1845): Eur. Micr. Ind. Meth. 58 no. 4 (1845); Wlsm. Ent. Mo. Mag. 39 258 (1903); Busck Pr. US. Nat. Mus. 27 745-6 (1904).

[*nec \*ORCHEMIA* (Gn.) Frnld. Can. Ent. 32 238-9 (1900). ALLONONYMA Busck Pr. US. Nat. Mus. 27 745-6 (1900)—*diana* Hb. (*Allononyma* Busck)—Guenée indicated by an \* that he was unacquainted with *diana* Hb. and thus cites *gallicana* Gn. as the Type of *Orchemia* Gn.]

Type 11: *Penthina servillana* Dp. (Stph. 1852; Frnld. 1908).

*CERATA* Stph. List Br. An. BM. 10 Lp. 77 no. 65 sp. 1-2 (1852); Frnld. Gn. Tortr. 36, 57 (1908).

Type 12: *Carpocapsa latiferreana* Wlsm. (Riley 1881).

MELISSOPUS Riley Tr. St. Louis Ac. Sc. 4 322-3 (1881). †MELLISOPUS Frnld. Tr. Am. Ent. Soc. 10 54 sp. 398 (1882). †MELLIOPUS Pkrd. US. Dp. Agr. Rp. Ent. Com. 5 219 (1890). MELISSOPUS Frnld. Bull. US. Nat. Mus. 52 471 sp. 5295 (1902). †MELLISOPUS Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5711 (1903). MELISSOPUS Frnld. Gn. Tortr. 42, (†MELISSOPUS) 60 (1908).

Type 13: *Leptarthra aulacodes* Lwr. (Lwr. 1902).

LEPTARTHRA Lwr. Tr. Roy. Soc. S-Austral. 26 253-4 (1902); Frnld. Gn. Tortr. 48, 63 (1908); Meyr. Pr. Linn. Soc. NSW. 36:1911 286 (1911).

Type 14: *Tortrix inquinatana* Hb. (Knl. 1910).

§CROBYLOPHORA Knl., Splr. Schm. Eur. 2 294 no. 28 sp. 1 Pf. 86·80 (1910).

§*Crobylophora* Knl. is homonymous with CROBYLOPHORA Meyr. (1881) *Lep.*

### 1. *Cydia signifer*, sp. n.

*Antennae* greyish fuscous. *Palpi* pale greyish. *Head* greyish fuscous. *Thorax* dark fuscous. *Forewings* dark fuscous, with a strong, milk-white, quadrangular patch arising from the middle of the dorsum, reaching two-thirds across the wing, gradually narrowed upward, taking the form of a triangle with the apex cut off; a series of geminated white streaklets, to the number of six or seven pairs along the costa, two before, and four or five beyond the middle, all terminating in bright steel-blue; the first two send out oblique steel-blue streaks to the upper extremity of the dorsal patch, the third sends out a curved steel-blue streak reaching to the flexus, above which it is somewhat dilated and divided; cilia bright shining lilac; underside greyish, iridescent, with six whitish costal spots beyond the middle. *Exp. al.* 10 mm. *Hindwings* tawny brown; cilia pale lilac; underside greyish, iridescent. *Abdomen* tawny greyish fuscous; underside silvery white. *Legs* greyish, with pale tarsal bands.

*Type* ♂ (66447) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*Type* ♀ (66448) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Two specimens.

### 2. *Cydia menoides*, sp. n. (Tab. VII. fig. 32.)

*Antennae* fuscous. *Palpi* white. *Head* and *Thorax* fuscous; face white. *Forewings* bronzy brown, with three groups of silvery white costal streaks, the first consisting of two streaks before the middle, one long and very oblique, steel-blue on its lower half, the other short, not reaching beyond the apex of the first; the second group consisting of four streaks, the first scarcely beyond the middle, long and very oblique, shading to lilac and steel-blue after leaving the costa, and reaching at its apex the metallic streak which forms the inner margin of the ocelloid patch, the two middle ones short, the outer one emitting a blue line reaching nearly as far as the third group, which consists of two less oblique streaks before the apex; on the middle of the dorsum is an oblique white cuneiform patch, tinged with lilac at its upper extremity, beyond this the ocelloid patch, containing two or three black lines, is margined before by a long, and behind by a short, pinkish lilac, metallic streak; cilia steel-grey, with a black line along their base, scarcely interrupted on the subapical indentation. *Exp. al.* 11 mm. *Hindwings* bronzy brown; cilia blue-grey, with a dark line along their base. *Abdomen* fuscous. *Legs* whitish cinereous.

*Type* ♂ (66440) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

### 3. *Cydia perlaeta*, sp. n. (Tab. VII. fig. 33.)

*Antennae* tawny fuscous. *Palpi* purplish grey. *Head* purplish fuscous. *Thorax* bronzy fuscous. *Forewings* dark bronzy brown on the basal half, ferruginous on the outer half; ornamented with angulated black



and steel-blue lines, and six whitish ochreous costal streaks, of which the first, scarcely before the middle, is reduplicated; this sends out a steel-blue line obliquely to beyond the middle of the cell, whence it is angulated backward to the middle of the dorsum, forming the outer boundary of the plain basal half; beyond it is a black line, more sharply angulated beyond the end of the cell, and followed by an angulated blue line arising from the third costal streak; other streaks and patches of these two colours are nearer to the lower half of the termen; cilia shining, steel-grey, with a brilliant blue iridescence in some lights; underside brilliantly iridescent, exhibiting green, blue, and red reflections, the costa with five white streaks. *Exp. al.* 12 mm. *Hindwings* brownish fuscous; cilia blue-grey, having a darker basal shade; underside brilliantly iridescent, exhibiting green, blue, and red reflections. *Abdomen* dark purplish fuscous. *Legs* greyish fuscous, with pale tarsal annulations.

*Type* ♂ (66441) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

#### 4. *Cydia eudesma*, sp. n.

*Antennae* greyish fuscous. *Palpi* short, slender, scarcely projecting beyond the face; white. *Head* and *Thorax* steel-grey; face whitish ochreous. *Forewings* steel-grey at the base, with a faint golden tinge, shading into rich umber-brown on the outer two-thirds; a series of seven costal streaks commencing before the middle, the first four oblique, the outer three moderately straight, golden yellowish on the costa, becoming silvery, or steel-blue, at their lower ends; a broad triangular lilac-metallic medio-dorsal patch containing three umber-brown streaks; a double metallic line standing upright at the tornus, the space between it and the dorsal patch pale straw-colour, with three umber-brown transverse lines, partially connected by a broken upright line; a lilac spot immediately below the apex; cilia shining steel-grey, with a slight lilac tinge. *Exp. al.* 8-8.5 mm. *Hindwings* brownish, paler at their base; cilia bluish grey. *Abdomen* shining, steel-grey. *Legs* whitish, tarsi grey.

*Type* ♀ (66462) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66463) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*). Three specimens.

#### 5. *Cydia pulchella*, sp. n., Drnt. (Tab. VII. fig. 34.)

*Antennae* fuscous, narrowly barred above with pale yellowish. *Palpi* and *Head* fuscous, mixed with pale yellowish. *Thorax* fuscous, transversely streaked with pale yellowish. *Forewings* fuscous, closely strigulate transversely with pale yellowish, the terminal area becoming obscured with fuscous, and with three or four oblique fuscous streaks, followed by lines of metallic leaden blue scaling, on the outer half of the costa; a large pyriform, leaden blue, tornal patch is attenuate upward and connected with the second metallic costal line; there is also a small metallic patch below the apex, followed by a sub-terminal line of obscure, round, dark fuscous dots; cilia shining, pale fuscous, with a dark fuscous line near their base. *Exp. al.* 8 mm. *Hindwings* dark fuscous; cilia fuscous, with a darker line toward their base. *Abdomen* dark fuscous, with slightly paler transverse bands. *Legs* fuscous, with paler tarsal spots.

*Type* ♂ (66465) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*). Unique.

#### 6. *Cydia deshaisiana* Lucas. (Tab. VII. fig. 35.)

†*dehaisiana* Lucas (erreur typographique)<sup>15</sup>, †*deshaysiana* Lucas, †*deshaisiana* Ltnr.; = *saltitans* Wstwd., †*saltatoria* Smrvl.—("Jumping Seeds"; "Brincadores").

[*moving seeds*: Hooker Jr. Bot. 6 304-6 (1854)<sup>1</sup>; Wstwd. Pr. Ent. Soc. Lond. (n.s. 3) 1854 27, 34-5 (1855)<sup>2</sup>; Nwmn. Pr. Ent. Soc. Lond. (n.s. 3) 1854 57-8 (1855)<sup>3</sup>; Wstwd. Pr. Ashmol. Soc. Oxf. 3 137-9 (1857)<sup>4</sup>; Lettsom Pr. Ent. Soc. Lond. (n.s. 4) 1857 90 (1858)<sup>5</sup>; Lucas

Bull. Soc. Ent. Fr. 27 (3 s. 6:1858) p. x (1858)<sup>6</sup>; Bdv. & Guér-Mén. Bull. Soc. Ent. Fr. 27 (3 s. 6:1858) p. xxxiii (1858)<sup>7</sup>. *Carpocapsa deshaisiana* Lucas. = *Carpocapsa †deshaisiana* Lucas Bull. Soc. Ent. Fr. 27 (3 s. 6:1858) p. xli-iv (12. III. 1858)<sup>8</sup>; CR. Ac. Sc. Inst. Fr. 46 685-9 (1858)<sup>9</sup>; 'l'Institut,' Jr. Univ. Sc. 26 127-8 (14. IV. 1858)<sup>10</sup>. *Carpocapsa †deshaysiana* Lucas Rev-Mag. Zool. (2 s.) 10:1858 171-6 (IV. 1858)<sup>11</sup>. *Carpocapsa* sp. Wstwd. Zool. 16 6036 (IV. 1858)<sup>12</sup> = Pr. Ent. Soc. Lond. (n.s. 5) 1858 8 (VII. 1858)<sup>12</sup>. *Carpocapsa saltitans* Wstwd. (Pr. Ent. Soc. Lond. 7. VI. 1858) Zool. 16 6152 (1. VII. 1858)<sup>13</sup>. *Carpocapsa deshaisiana* Lucas Rev-Mag. Zool. (2 s.) 10:1858 470-84 Pf. 16 · 1-10 (XI. 1858)<sup>14</sup>; Bull. Soc. Ent. Fr. 27 (3 s. 6:1858) pp. ccii-iii (23. III. 1859)<sup>15</sup>. *Carpocapsa saltitans* Wstwd. Pr. Ent. Soc. Lond. (n.s. 5) 1858 27 (7. III. 1859)<sup>16</sup>; Gardn. Chron. 1859 909 tf. (12. XI. 1859)<sup>17</sup>. *Carpocapsa deshaisiana* Lucas Ann. Soc. Ent. Fr. 28 (3 s. 7:1859) 561-6 (1. III. 1860)<sup>18</sup>. *Carpocapsa saltitans* Wkr. Cat. Lp. BM. 28 396 sp. 9 (1863)<sup>19</sup>; Buchenau Abh. NW. Ver. Bremen 3 371-7 (1873)<sup>20</sup>; Riley Tr. St. Louis Ac. Sc. 3 Jr. p. cxc-i (1875)<sup>21</sup>; ccxvii (1878)<sup>22</sup>; Am. Nat. 10 216-8 (1876)<sup>23</sup>; Dodge Field & Forest 2 54-5 (1876)<sup>24</sup>. *Carpocapsa †deshaiziana* Seeley & Ltnr. Pr. Albany Inst. 2 263-6 (1878)<sup>25</sup>. *Carpocapsa saltitans* Frnld. Tr. Am. Ent. Soc. 10 54 sp. 396 (1882)<sup>26</sup>; Riley Pr. US. Nat. Mus. 5:1882 632-5 tf. 633 · a-f (1883)<sup>27</sup> = Ann-Mag. NH. (5 s.) 12 140-1 (1883)<sup>27</sup>. *Carpocapsa deshaisiana* Girard Traité d'Ent. 3 718-9 (1885)<sup>28</sup>. *Carpocapsa saltitans* Ramirez La Nat. (Soc. Mex. HN.) (2 s.) 1 54-9 Pf. 7 · 1-7 (1888)<sup>29</sup>; Ltnr. Rp. NY. State Mus. NH. 41:1887 271-4 tf. (1888)<sup>30</sup> = Rp. Ins. NY. 4 151-4 tf. (1888)<sup>30</sup>; Ascherson SB. Ges. Nat. Freunde Berl. 1889 187-8 (1889)<sup>31</sup>; H. Edw. Bull. US. Nat. Mus. 35 119-20 (1889)<sup>32</sup>. *Carpocapsa †saltatoria* Somerville Pr. NH. Soc. Glasg. (n.s.) 3 p. xxvi-vii (1890)<sup>33</sup>. *Carpocapsa saltitans* [...] Psyche 5 380 (1890)<sup>34</sup>; Berg An. Soc. Ci. Argent. 31 98-105 (1891)<sup>35</sup>; Buchenau Abh. NW. Ver. Brem. 12 47-52 (1891)<sup>36</sup>; Riley US. Dp. Agr. (Div. Ent.) Ins. Life 3 431, 432 (1891)<sup>37</sup>; Rose US. Dp. Agr. (Div. Bot.) Contr. US. Nat. Herb. 1 112 (1891)<sup>38</sup>; Riley Am. Nat. 25 673-5 (1891)<sup>39</sup>; Watson Pr. Am. Ac. Art-Sc. 26 (n.s. 18) 149-50 (1891)<sup>40</sup>; Riley (transl. Chrtm.) Le Nat. 13 (2 s. 5) 268-9 (1891)<sup>41</sup>; E. Hfm. Stett. Ent. Ztg. 52 254-6 (1891)<sup>42</sup>; Buchenau Abh. NW. Ver. Brem. 12 277-90 (1892)<sup>43</sup>; Riley Pr. Ent. Soc. Wash. 2 178-81 (1892)<sup>44</sup>, 213-4 (1892)<sup>45</sup>; Buchenau La Nat. (Soc. Mex. HN.) (2 s.) 2 389-403 (1894)<sup>46</sup>; Ramirez La Nat. (Mex.) (2 s.) 2 403-4<sup>47</sup>, 408-10 (1894)<sup>48</sup>; Maury La Nat. (Mex.) (2 s.) 2 405-7 (1894)<sup>49</sup>. *Ernarmonia saltitans* Kby., Lloyd's NH. 5 (Moths 3) 280-1 Pf. 154 · 3-5 (1897)<sup>50</sup>. *Carpocapsa saltitans* Sharp Camb. NH. 6 (Ins. 2) 428 (1901)<sup>51</sup>. *Cydia saltitans* Frnld. Bull. US. Nat. Mus. 52 471 sp. 5297 (1902)<sup>52</sup>. *Carpocapsa saltitans* Pax, Engler's Pflanzenreich 52 145, 147-8, 266-7 (1912)<sup>53</sup>.

*Hab.* MEXICO<sup>1-53</sup>: ⊕ *Sebastiania*<sup>36-49, 53</sup> [= \**Colliguaja* Wstwd.<sup>13, 16-17, 21-3, 27, 29, 34-9, 41, 44, 46</sup>; = \**Colliguaja odorifera* (*Croton colliguaja*)<sup>33-5, 37, 39, 41, 44, 50-1, 53</sup>; Arrow-weed (*Yerba de flecha*)<sup>21-4, 26-7, 29, 34-9, 41, 44, 53</sup>]<sup>1-53</sup>; *S. pavoniana* Müll-Arg.<sup>36, 42-3, 46, 48, 53</sup>; *S. palmeri* Rose<sup>37-41, 43-4, 53</sup>; *S. pringlei* Wats.<sup>39-41, 43-4</sup>; *S. ramirezii* Maury (= \**Sapium* sp.)<sup>29</sup> 40, 47-9, 53: ⊕ VI-VII<sup>20, 27</sup>, VIII-II<sup>14, 20, 27</sup>, III-IV<sup>20</sup>, IV<sup>20</sup>, ⊙ II<sup>8-11, 14, 29-30</sup>, IV<sup>30</sup>, V<sup>20</sup>, VI<sup>20, 29-30</sup>, VII-VIII<sup>29-30, 35</sup>, IX<sup>30</sup>: SONORA<sup>20, 25, 27, 29, 34-5, 38, 40-9, 53</sup>: Alamos (= †*Mamos* 27, 34, 36, 44, 46)<sup>20, 25, 27, 29, 34-6, 38-44, 46, 49</sup>: TEPIC<sup>4-9, 14, 17-18, 35-6</sup>: Compostela<sup>18</sup>, Tepic (= †*Tassee*<sup>4</sup>, = †*Tassic*<sup>5, 46</sup>, = \**nr. Mexico*<sup>6-11, 14, 18</sup>)<sup>4-9, 14, 17-18, 36, 46</sup>: [? SAN LUIS POTOSI<sup>40-1, 44</sup>: San José

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Pass (*C. G. Pringle*)<sup>40-1, 44</sup>]: MICHOACAN<sup>29, 35, 42-3, 48, 53</sup>: Tacámbaro<sup>29, 35, 42-3</sup>; Turicato<sup>29, 35, 42-3</sup>; Uruapan<sup>29, 35, 42-3</sup>; Plan de Taretán<sup>29, 35, 42-3</sup>; Ario<sup>29, 35, 42-3</sup>; Plan de Urecho<sup>29, 35, 42-3</sup>: PUEBLA-GUERRERO<sup>29, 35, 42-3, 53</sup>; Valle de Huamuxtitlán<sup>29, 35, 42-3</sup>: VERA CRUZ<sup>29, 35, 42-3, 53</sup>.

Sir W. J. Hooker<sup>1</sup> wrote, in 1854:—"If asked to guess at the plant to which the seed belongs, I should say, to some species of *Colliguaya* (and very probably to the *Colliguaya odorifera*, Hook.) a common shrub on the coast of Chili." Westwood doubtless ascertained that "*Colliguaja*" was the native name of the plant, but this was evidently a Chilean name applied to a Chilean plant, and there appears to be no evidence to support the statement that "the plant is known by the Mexicans as '*Colliguaja*'" (Riley<sup>27</sup>). The genus *Colliguaja* Molina is confined to South America, and the mere suggestion made by Hooker, in 1854, would seem to be the only foundation for the general assumption that *deshaisiana* is in any way associated with *Colliguaja odorifera* Molina (= *Croton colliguaja* Sprengel).

Three species of *Cydia* have been bred from "Jumping Beans"—*deshaisiana* Lucas (= *saltitans* Wstwd.) from *Sebastiania pavoniana* Müll-Arg., etc.; *sebastianiae* Riley from *Sapium biloculare* Wats.; and *motrix* Berg [An. Soc. Ci. Argent. 31 105-10 (1891)] from *Colliguaja brasiliensis* J. Müll., in Uruguay.—Drnt.

### 7. *Cydia sebastianiae* Riley.

*Grapholitha sebastianiae* Riley [US. Dp. Agr. (Div. Ent.) Ins. Life 3 432 (VI. 1891), etc., LN.]<sup>1</sup> Pr. Ent. Soc. Wash. 2 213-4 (30. VI. 1892)<sup>2</sup>; Sharp Camb. NH. 6 (Ins. 2) 428 (1901)<sup>3</sup>. *Enarmonia sebastianiae* Frnld. Bull. US. Nat. Mus. 52 470 sp. 5285 (1902)<sup>4</sup>. *Grapholitha sebastianiae* Pax, Engler's Pflanzenreich 52 148, 221, 254 (1912)<sup>5</sup>.

Type (? US. Nat. Mus.).

Hab. MEXICO<sup>1-5</sup>: [=SONORA, NW.], ⊕ *Sapium biloculare* Watson [= \**Sebastiania?* *bicapsularis* (*bilocularis*)<sup>1-3</sup>]<sup>5</sup>.

### 8. *Cydia metaspilana* Wkr. (Tab. VIII. fig. 2.)

*Carpocapsa metaspilana* Wkr. Cat. Lp. BM. 28 405-6 sp. 29 (1863)<sup>1</sup>.

Type ♀ (1845:123, Belize); PT. ♀ (1858:6, Ega) BM.

Hab. AMERICA, C-S. Central America—BRITISH HONDURAS (= \**HONDURAS*<sup>1</sup>): nr. Belize, 1844-5 (*D. Dyson*). South America—BRAZIL<sup>1</sup>: AMAZONS<sup>1</sup>: Ega (*H. W. Bates*)<sup>1</sup>.

### 9. *Cydia latiferreana* Wlsm.

= *aurichalceana* Riley (†*orichalceana* Wlsm.)<sup>2</sup>; = \**saltitans* (nec Wstwd.) Ltnr.<sup>4</sup>

*Carpocapsa latiferreana* Wlsm. Ill. Typ. Lp-Het. BM. 4 pp. xi, 70 Pf. 76·8 (1879)<sup>1</sup>. *Melissopus latiferreana* Wlsm. (*aurichalceana* Riley) Riley Tr. St. Louis Ac. Sc. 4 322-3 (1881)<sup>2</sup>. †*Melissopus latiferreanus* Frnld. Tr. Am. Ent. Soc. 10 54 sp. 398 (1882)<sup>3</sup>; Ltnr. Rp. Ins. NY. 4:1887 153 (1888)<sup>4</sup>. †*Melissopus latiferreana* Pkrd. US. Dp. Agr. Rp. Ent. Com. 5 219 sp. 357 (1890)<sup>5</sup>. †*Melissopus latiferreana* Mfft. Can. Ent. 23 168 (1891)<sup>6</sup>. *Melissopus latifer-*

*reanus* Frnld. Bull. US. Nat. Mus. 52 471 sp. 5295 (1902)<sup>7</sup>. †*Mellisopus latiferreanus* Krft., Smith's Check-List Lp. Bor-Am. 104 sp. 5711 (1903)<sup>8</sup>.

Type ♀ (92520) BM.

*Hab.* AMERICA, N-C. Canada—CANADA (*Moffatt*)<sup>6</sup>. United States—MAINE<sup>7</sup>—NEW HAMPSHIRE<sup>2-3</sup>—MARYLAND (*Mus. Joannis*, 3113 Wlsm. Det. 1898)—N. CAROLINA, 1884 (*H. K. Morrison*)—MISSOURI<sup>2-3</sup>: ST. LOUIS<sup>2-3</sup>: Kirkwood, ⊕ in acorns, ex. 1. VI. 1876<sup>2</sup>—TEXAS<sup>2-3</sup>: DALLAS (*J. Boll*)<sup>2</sup>: BOSQUE: 12. VIII. 1876 (*G. W. Belfrage*)—CALIFORNIA<sup>1-3, 7</sup>: MENDOCINO<sup>1</sup>: Head of Noyo River, 9. VI. 1871 (*Wlsm.*)<sup>1</sup>: LAKE: Scott's Valley, 17-19. VI. 1871 (*Wlsm.*)—OREGON<sup>1</sup>: JOSEPHINE: Rogue River, 7. V. 1872 (*Wlsm.*)<sup>1</sup>. Central America—MEXICO: MORELOS: Cuernavaca, VII. 1906 (*W. Schaus*, US. Nat. Mus. 6027 Wlsm. Det. 1908).

### 10. *Cydia eucyanea*, sp. n. (Tab. VIII. fig. 1.)

*Antennae* bright steel-blue above, steel-grey beneath. *Palpi* short, scarcely projecting beyond the head, with a moderate brush of dense coarse scaling beneath the median joint, beyond which the short obtuse terminal joint is inconspicuous; leaden purple. *Head* dark blue. *Thorax* black, tegulae steel-blue. *Forewings* widening outward, the costa evenly arched, apex depressed, rounded, termen sinuate below apex, not oblique, dorsum straight; black, with a large, elongate, quadrate patch of bluish bottle-green from the base, occupying the lower half of the wing nearly to the tornus, the costal half above it streaked with bright iridescent steel-blue; two outwardly oblique streaks from the costa, before the middle, are followed by one from the middle which extends obliquely, with a very slight outward bend, to the tornus; this again is followed on the costa by a small triangular spot; there is a rather longer, pointed, but scarcely oblique streak, and beyond this another streak descending nearly to the tornus, but sometimes slightly interrupted above its middle; there is another short costal streak, and then another streak running parallel with and very near the termen, but not reaching the costa or tornus; cilia bright steel-blue; underside dark iridescent blue, with green reflections. *Exp. al.* 24 mm. *Hindwings* 1, apex rounded, termen slightly sinuate, dorsum evenly rounded; dark iridescent blue, shading to blackish; cilia bright steel-blue; underside dark iridescent blue, with green reflections. *Abdomen* bottle-green, shading to dark blue above. *Legs* steel-grey, with blue reflections.

Type ♀ (6010 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: VERA CRUZ: Tlictopec (*H. Schwarz*). Unique.

## Fam. 12. TORTRICIDAE.

### PSEUDATTERIA Wlsm.

(*ψευδής* = false; *Atteria* Wkr., nom. gen.)

Type: *Pseudatteria potamites* Wlsm. (Tab. VIII. fig. 4.)

PSEUDATTERIA Wlsm., *ante* 214 (1913).

*Antennae* simple. *Palpi* projecting twice the length of the head beyond it, curved downward; terminal joint much shorter than median. *Head* and *Thorax* smoothly scaled. *Forewings* with the costa evenly arched, apex obtuse, termen convex: *neuration* 12 veins; 7-8 separate, 7 to costa. *Hindwings* broad, brightly coloured: *neuration* 8 veins; 3-4 connate, 5 straight, not approximate to 4; 6-7 closely approximate towards base; cubitus impectinate. *Abdomen* rather slender; genital segments of ♂ strongly developed. *Legs*: hind tibiae smooth.

This genus is readily separated from *Atteria* Wkr. by having FW: 7-8 separate, not stalked as in *strigicinctana* Wkr.

### 1. *Pseudatteria potamites* Wlsm., ante 214. (Tab. VIII. fig. 4.)

*Antennae* dark purplish fuscous. *Palpi* projecting twice the length of the head beyond it, convex above; dark purplish fuscous, white at the base and on the inner side of the median joint to beyond its middle. *Head* smooth, purplish fuscous, with a white spot adjacent to each eye on the forehead. *Thorax* shining, reddish orange, a cuneiform fuscous spot on the anterior edge; tegulae dark purplish fuscous, margined in front and externally with white. *Forewings* with the costa evenly arched, apex obtuse, termen convex, showing alternate stripes of dark purplish fuscous and white, to the number of nine of each, all parallel, the first two white streaks being shorter than the others and joined at their lower extremities in form of the letter U; the eighth and ninth white stripes are sometimes confluent at their base; beyond the succeeding fuscous streak the next two white ones are also confluent below the middle and somewhat variable in form, usually throwing out a furcate branch to the termen below the apex from their base and leaving one or two fuscous spots detached and encroaching on the shining reddish orange surface preceding them; at the apex itself is a short V-shaped fuscous mark, its furcation being caused by a cuneiform white apical streak; below the terminal streaks (which are described as being connected with the costal series above) three or four more alternations of white and fuscous reach to the tornus, in some specimens preceded by one or two fuscous spots; within the striated margin the whole of the wing-surface (being about two-thirds of its width including the dorsum) is shining reddish orange. *Exp. al.* 26-32 mm. *Hindwings* reddish orange, with a group of three purplish fuscous spots around the apex, and a series of about five spots along the margin below them; the cilia between the spots orange, like the wing-surface, except for one white spot at the apex, whereas the cilia of the forewings conform to the colour of the marginal streaks. *Abdomen* shining, reddish orange, a purplish fuscous patch on the terminal segment, with one also on each side margined by white and representing lateral tufts of long hair-scales. *Legs* reddish orange, with some fuscous shading about the tarsi.

*Type* ♂ (4601); ♀ (4602) *Jalapa*, Mus. Wlsm. BM. [PTT. (66229, 66251, 66259, 66264; 5962-8 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab. Central America*—MEXICO: VERA CRUZ: *Jalapa*, 4500 ft. (*W. Schaus*; *Hoega*); *Cuesta de Misantla* (*M. Trujillo*; *W. Schaus*); *Coatepec* (*J. Brooks*); *Cordova*, III. 1908 (*F. Knab*); *Orizaba*, II. (*R. Müller*; *W. Schaus*)—BRITISH HONDURAS: *Rio Sarstoon* (*Blancaneaux*)—GUATEMALA: ALTA VERA PAZ: *Purula*, 4000 ft., X-XI. 1879 (*G. C. Champion*); *Senahu*, 2800 ft., XI. 1879 (*G. C. Champion*); *Cubilguitz*, 1050 ft., III. 1880 (*G. C. Champion*); *Panzos*, V. 1880 (*G. C. Champion*): SACATEPEQUEZ: *Capetillo*, IV-V. 1879 (*G. C. Champion*); *Zapote*, 2000 ft., V-VI. 1879 (*G. C. Champion*): SUCHITEPEQUEZ: *San Isidro*, 1600 ft., IX. 1880 (*G. C. Champion*): RETALHULEU: *Las Mercedes*, 3000 ft., IX-X. 1880 (*G. C. Champion*): SAN MARCOS: *El Tumbador*, 2500 ft., X-XI. 1880 (*G. C. Champion*)—COSTA RICA: *Caché* (*H. Rogers*); *Volcan de Irazu*, 6000-7000 ft. (*H. Rogers*); *Juan Viñas*, 2500-3500 ft., XI. 1906 (*W. Schaus*). Fifty-five specimens.

### 2. *Pseudatteria geminipuncta*, sp. n. (Tab. VIII. fig. 5.)

*Antennae* bronzy fuscous. *Palpi* (missing). *Head* purplish fuscous, with some white marginal scales. *Thorax* orange; tegulae dark purplish fuscous, margined with white. *Forewings* reddish orange, with alternating white and dark purplish fuscous marginal streaks, not encroaching on the ground-colour—eleven fuscous along the costa, of which the ninth and tenth from the base are inverted, the eleventh very small, just before the apex, which is itself enclosed by another furcate streak, a pair of small spots situated below the extremity of this and the tenth spot respectively; there are also three fuscous terminal streaks, each a little longer than the one above it, and one tornal streak, sometimes broken by a white marginal spot; the border is about one-third of the wing-width, but widened toward and around the apex. *Exp. al.* 16 mm. *Hindwings* deep reddish orange, with large apical and smaller terminal



purplish fuscous spots—to the number of about six, including a part of the dorsum. *Abdomen* deep reddish orange. *Legs* orange; hind tarsi stained with fuscous.

*Type* ♀ (1894: 68) BM.

*Hab.* PANAMA: (*Saunders Coll.*). Unique.

### 3. *Pseudatteria rivularis* Btlr. (Tab. VIII. fig. 3.)

*Atteria rivularis* Btlr. Ann-Mag. NH. (4 s.) 15 342 (1875)<sup>1</sup>.

*Type* ♀ (1875: 28) BM.

*Hab.* PANAMA: VERAGUA (*O. Salvin*)<sup>1</sup>.

### 4. *Pseudatteria volcanica* Btlr.

*Atteria volcanica* Btlr. Cist. Ent. 1 90 (1872)<sup>1</sup>: Lp. Exot. 178 sp. 1 Pf. 61·4 (1874)<sup>2</sup>.

*Type* ♀ (1875: 17) BM.

*Hab.* AMERICA, C-S. Central America—PANAMA (*Crowley Coll. BM.*). South America—COLOMBIA (*NEW GRANADA*)<sup>1-2</sup>: CUNDINAMARCA: Bogota (*J. M. V. Vergava*; *H. Ellis*).

### 5. *Pseudatteria cladodes*, sp. n. (Tab. VIII. fig. 6.)

[*Antennae* bronzy brown, tinged with purple towards the base. *Palpi* porrect to twice the length of the head beyond it; dark purple. *Head* and face whitish.] *Thorax* orange-red, the tegulae barred with black. *Forewings* orange-red, the costa and termen striped alternately with dark purple and white, forming a band along the costa, at least one-third of the width of the wing, which becomes dilated to greater width opposite to the apex and termen; the purple stripes along the costa are ten in number, but of these the fourth, eighth, and tenth are merely short spots, the fourth and eighth tending to confluence at their lower extremities with the next stripes beyond them; the ninth is nearly twice as long as any of the others, and is inverted to the outer end of the cell; the remainder of the series consists of two terminal and one tornal, these are shorter and squarer than the others, the tornal being larger than the terminal, a rather broad white space filling the interval between these and the inverted large subapical stripe; the orange space is unspotted. *Exp. al.* 26 mm. *Hindwings* orange-red, with an inwardly concave dark purple patch occupying the apex, with two or three white spots in the cilia; below this are three small purple spots on the termen and another, rather larger, at the tornus. *Abdomen* and *Legs* orange-red; hind tarsi banded with dark purple.

*Type* ♀ (400153, *C. America*) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America (*O. Salvin*, 400153): [?= PANAMA (*O. Salvin*)]. South America—PERU (*Saunders Coll.*).

The head is missing from the Type: the antennae, palpi, and head are described from the Peruvian Paratype (1894: 68).

### 6. *Pseudatteria leopardina* Btlr. (Tab. VIII. fig. 7.)

*Atteria leopardina* Btlr. Cist. Ent. 1 89 (1872)<sup>1</sup>: Lp. Exot. 178 sp. 2 Pf. 61·5 (1874)<sup>2</sup>.

*Type* ♀ (1875: 17, *Cartago*) BM.

*Hab.* Central America—COSTA RICA<sup>1-2</sup>: Cartago (*Van Patten*)<sup>1-2</sup>; Volcan de Irazu, 6000–7000 ft. (*H. Rogers*); Rio Sucio (*H. Rogers*); Tres Rios, XII. 1906 (*W. Schaus*); La Palma, 2. X. 1896 (*Mus. Joannis*); San Isidro (*Tristan, Mus. Joannis*)—PANAMA:

CHIRIQUI: Bugaba, 1881-3 (*G. C. Champion*); Volcan de Chiriqui, 3000-6000 ft., 1881-2 (*G. C. Champion*).

### IDOLATTERIA Wlsm.

(εἰδωλον = a portrait; *Atteria* Wkr., nom. gen.)

Type: *Idolatteria simulatrix* Wlsm. (Tab. VIII. fig. 8.)

IDOLATTERIA Wlsm., ante 214 (1913).

*Antennae* less than half the length of the forewings. *Palpi* projecting twice the length of the head beyond it, curved downward; terminal joint much shorter than median. *Head* and *Thorax* smoothly scaled. *Forewings* with the costa somewhat abruptly arched near the base, apex obtuse, termen convex, slightly oblique: *neuration* 12 veins, all separate; 7 to termen. *Hindwings* broad, brightly coloured: *neuration* 8 veins; 3-4 separate, 5 closely approximate to 4; 6-7 closely approximate toward base; cubitus impectinate. *Abdomen* moderate. *Legs*: hind tibiae smoothly scaled.

This genus differs from *Atteria* Wkr. in having FW: 7-8 separate, not stalked; and from *Pseudatteria* Wlsm. in FW: 7 going to the termen below the apex, not to the costa—HW: 5 is closely approximate to 4, while in *Pseudatteria* this vein is straight.

[*Idolatteria maon* Druce.—*Atteria maon* Druce Ann-Mag. NH. (7 s.) 7 440 (1901) Ecuador. This species must be referred to *Idolatteria* Wlsm.—Drnt.]

#### 1. *Idolatteria simulatrix* Wlsm., ante 214. (Tab. VIII. fig. 8.)

*Antennae* purplish black, sprinkled with white scales beyond the middle. *Palpi* dark reddish grey. *Head* purplish black on the crown; face white. *Thorax* purplish black, mottled with dirty white; patagia and the tips of the tegulae white. *Forewings* reddish orange, after a few white scales at the extreme base of the costa is a series of ten dark reddish purple costal streaks, including a spot at the apex, alternating with white spaces; along the termen are about six smaller spots of the same colour, two, very small, below the apex, sometimes tending to become confluent with the outer one of two larger spots which precede them; the next two spots are each preceded by another, and a few very small spots are ranged again within the outer series and along the dorsum; cilia conforming to the adjacent colours. *Exp. al.* 25 mm. *Hindwings* reddish orange, with eight purplish marginal spots, including one apical and one costal, within which is a second, shorter, parallel series of four or five; cilia conforming to the adjacent colours. *Abdomen* orange, barred with blackish in front and behind. *Legs* dark reddish grey.

Type ♀ (66270) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*).  
Unique.

Almost inseparable in appearance from *Atteria strigicinctana* Wkr., but differing in *neuration* and in its somewhat longer palpi.

#### 2. *Idolatteria pyropis*, sp. n. (Tab. VIII. fig. 9.)

*Antennae* less than  $\frac{1}{2}$ ; purplish fuscous, fading to whitish on the outer half. *Palpi* porrect to fully twice the length of the head beyond it; dark purplish fuscous. *Head* yellowish white, stained with purplish fuscous above. *Thorax* purplish fuscous, with small, lateral, orange streaks posteriorly and on the tegulae. *Forewings* with the costa arched, especially toward the base, apex obtuse, termen obliquely convex; deep orange, the costa and termen alternately marked with dark purple and yellowish white, the purple assuming a more reddish tinge where it encroaches on the orange ground-colour, as it does more widely toward the base, reaching nearly to one-third of the width of the wing, whereas outwardly

it scarcely reaches one-fourth; the series consists of nine costal, one apical (inverted), and six or seven terminal streaks, of which two below the apex and one at the tornus are very small, the upper ones being at the end of a series of larger spots following the line of the cell to the base; two other series occur along the fold and dorsum respectively, the intermediate space beyond the middle containing other spots, irregular in number and distribution. *Exp. al.* 29 mm. *Hindwings* reddish orange, irregularly spotted throughout with purplish fuscous, the spots toward the base and dorsum larger than the others; cilia blackish, terminal line yellowish, interrupted by the dark marginal spots. *Abdomen* purplish fuscous, with five pale yellow transverse bands. *Legs* dark purplish fuscous.

*Type* ♂ (66225) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*). Unique.

### POLYORTHA Dgn.

*Type*: *Polyortha niveipunctata* Dgn. (Dgn. 1905).

POLYORTHA Dgn. Ann. Soc. Ent. Belg. 49 85–6 (1905); Frnld. Gn. Tortr. 48, 63 (1908).

*Antennae* about  $\frac{1}{2}$ , simple. *Palpi* projecting at least twice the length of the head beyond it; hirsute, with long hair-like scales projecting beyond the base of the somewhat hirsute, porrected, terminal joint. *Head* somewhat roughly clothed. *Thorax* with moderate posterior crest. *Forewings* elongate, ovate, costa convex throughout, with groups of rough projecting scales; apex obtuse or somewhat angular, termen oblique, sometimes sinuate, with patches of raised scales: *neuration* 12 veins; 7–8 sometimes closely approximate, 7 to costa; 3 from near end of cell; 4–5 approximate, connate, or stalked. *Hindwings* 1; termen slightly sinuate; apex obtuse: *neuration* 8 veins; 3–4 stalked (or connate), 5 remote, nearly parallel to 4; 6–7 closely approximate toward base, or short-stalked. *Abdomen* moderate. *Legs*: hind tibiae nearly smooth.

This genus is closely allied to *Oxygrapha* Hb., which it greatly resembles in general appearance, and with which it agrees in having FW: 7 to costa, but differs in its longer palpi, and in HW: 5 being remote from 3–4, which are stalked in the Central American species. It is possible that several of the forms here described as species may ultimately prove varieties of some polymorphic species—having regard to the variation exhibited in some of the European species of *Oxygrapha*.

#### 1. *Polyortha nigriguttata*, sp. n. (Tab. VIII. fig. 10.)

*Antennae* whitish at the base, speckled with grey, cinereous beyond. *Palpi* very long, reaching four times the length of the head beyond it, the terminal joint about half the length of the median; white, speckled with greyish brown. *Head* white, speckled with greyish brown. *Thorax* white, with a large black spot posteriorly. *Forewings* with the costa evenly and considerably arched, ciliate throughout, the cilia beyond the middle notched; white, speckled with light brown, and spotted with black; the black spots arranged as follows:—one on the middle of the costa, a second beneath and slightly before it; straight below the second is a small one above the fold, preceded by a group of three, nearer to the base, two below and one above the fold; a large one, beyond the middle of the dorsum, preceded by two smaller ones, nearer to the base, scarcely touching the dorsum; at the tornus is a reduplicated black spot, and above it a similar double spot opposite the middle of the termen, preceded by a single one at the outer end of the cell; the brown sprinkling is more noticeable along the costa, where it has a tendency to take the form of slender, angulated or circular lines; cilia white, speckled with grey near their base; underside greyish brown, the cilia distinctly whitish throughout. *Exp. al.* 30 mm. *Hindwings* greyish brown; cilia slightly paler, with a dark shade along their base, tending to whitish at the apex; underside greyish brown. *Abdomen* greyish brown. *Legs* pale cinereous.

*Type* ♀ (66271) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 4000–5000 ft., 1881–2 (*G. C. Champion*). Unique.

## 2. *Polyortha chiriquitana* Z.

*Teras chiriquitana* Z. Hor. Soc. Ent. Ross. 13 80-3 sp. 4 (1877)<sup>1</sup>.

Type ♂ Mus. Stgr.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Volcan de Chiriqui (*H. Ribbe*)<sup>1</sup>.

[? = *Polyortha gradatulana* Z.—*Teras gradulatana* Z. Stett. Ent. Ztg. 27 138-9 sp. 2 Pf. 1.1 (1866) Colombia (*Kaden*).]

## 3. *Polyortha magnifica*, sp. n. (Tab. VIII. fig. 11.)

*Antennae* whitish, speckled with fuscous. *Palpi* projecting more than twice the length of the head beyond it; hoary white, with some ochreous shading. *Thorax* hoary whitish, with some iridescent green and grey scales. *Forewings* hoary white, with strong tufts of cilia along the costa, and two or three tufts of raised scales on the wing-surface; an oblique narrow band, leaving the costa at one-fourth from the base, terminates before the dorsum nearer to the base—at first sight this appears to be black, but with the lens is shown to be mixed with brilliant bottle-green and blue scales; some brilliant, metallic, pale green scales are scattered above and along the cell, and some slender streaklets of purplish fuscous occur along the costa and about the apical portion of the wing; cilia hoary, with some fuscous spots along their base, and one at the tornus; underside brownish lilac, the marginal cilia whitish throughout. *Exp. al.* 28 mm. *Hindwings* pale yellowish brown; cilia pale grey. *Abdomen* yellowish brown. *Legs* greyish.

Type ♂ (66272) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 4000-6000 ft., 1881-2 (*G. C. Champion*). Unique.

## 4. *Polyortha eupeplana*, sp. n. (Tab. VIII. fig. 12.)

*Antennae* greenish, banded above with brown. *Palpi* olive-green, speckled with lighter scales. *Head* olive-green. *Thorax* chocolate-brown, the tegulae touched with green at their base. *Forewings* with the costa strongly hirsute; olive-green, speckled with fuscous, with a broad band of chocolate-brown, commencing on the costa near the base, extending downward across the fold nearly to the dorsum, abruptly attenuated outwards on the middle of the wing, and thence again dilated reverting to the costa before the apex; on this band are several raised tufts of brown scales, of which the most conspicuous are a long one below the fold and a smaller one beyond the end of the cell, there are also some small tufts on the green ground-colour; cilia reddish grey, brown at the apex. *Exp. al.* 33 mm. *Hindwings* pale cinereous; cilia lighter, tinged with reddish at the apex. *Abdomen* and *Legs* pale cinereous, the tarsal joints spotted with greyish fuscous.

Type ♀ (67070) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*). Unique.

## 5. *Polyortha glaucotes*, sp. n.

*Antennae* greenish. *Palpi* pale olive-green. *Head* and *Thorax* pale olive-green, the tegulae with a brownish fuscous spot at their outer side. *Forewings* shining, pale olive-green, with two or three small tufts of raised scales, and some pale brown speckling throughout; a small brownish fuscous spot lies at the upper edge of the cell, at one-fourth from the base, and a few brownish fuscous spots lie around the tornus at the base of the pale olive-brown cilia. *Exp. al.* 27 mm. *Hindwings* yellowish brown. *Abdomen* yellowish brown. *Legs* brownish grey.

Type ♀ (66273) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 4000–6000 ft., 1881–2 (*G. C. Champion*). Two specimens.

In a second specimen (66274 ♀) there is a conspicuous roundish fuscous spot touching the costa at about one-fourth from the base.

**6. *Polyortha fluminana*, sp. n.** (Tab. VIII. fig. 13.)

*Antennae, Palpi, and Head* olive-grey. *Thorax* olive-grey, with a slight brownish tinge. *Forewings*, with the costa hirsute; olive-grey, slightly speckled with a darker shade; with a strong curved band of pale reddish fawn, commencing on the middle of the base and following the fold, bending upward from the middle of the fold to the outer fourth of the costa, where it becomes almost white along its upper edge; there are three or four tufts of raised scales, corresponding to the colour on which they rest, the two most conspicuous being a small parti-coloured spot at the lower edge of the pale band below the fold, at one-third of its length, and a long parti-coloured ridge crossing the fold at two-thirds, which reaches the dorsum at its lower extremity, and halfway across the pale band at its upper extremity; cilia pale olive-grey. *Exp. al.* 25.5 mm. *Hindwings* pale yellowish brown; cilia lighter. *Abdomen* yellowish brown. *Legs* pale cinereous.

*Type* ♀ (67071) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Unique.

**7. *Polyortha niveipunctata* Dgn.**

*Polyortha niveopunctata* Dgn. Ann. Soc. Ent. Belg. 49 85–6 (1905)<sup>1</sup>.

*Type* ♀ (6545 Drnt. Det. 1911) Mus. Dognin.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–8000 ft., 1881–2 (*G. C. Champion*). South America—COLOMBIA: MAGDALENA: Minca, Sierra Nevada de Santa Marta, 2000 ft., VI. 1899 (*H. H. Smith*): TOLIMA: Sierra del Libano, 6000 ft., V. 1899 (*H. H. Smith*)—ECUADOR<sup>1</sup>: LOJA<sup>1</sup>: Loja<sup>1</sup>.

**8. *Polyortha hirsuta*, sp. n.**

*Antennae* pale brown, banded above with fuscous. *Palpi* brown, projecting a little more than the length of the head beyond it; terminal joint shaded with fuscous. *Head and Thorax* tawny brownish, the latter tufted behind. *Forewings* tawny brownish, mottled with reddish fuscous; with three conspicuous tufts of grey scales—one at the base of the fold, one below the middle of the fold, and one near its outer extremity, contiguous to the dorsum; other patches of raised scales are less conspicuous—one near the middle of the base, and one above and before the tornus; the costa is marked throughout with tawny fuscous spots at irregular intervals, the largest of these, at one-fourth from the base, being produced obliquely outward to a blotch of the same colour, resting on the upper edge of the fold; the apical fourth of the wing shows also some tawny fuscous mottling, passing somewhat obliquely from the costa to the termen (as in *tersa* Wlsm.)—the forewings are unusually narrow for this genus; cilia brownish, mixed with tawny fuscous; underside with the costa and termen much mottled. *Exp. al.* 18 mm. *Hindwings* brownish grey; cilia slightly paler; underside with the costa and termen much mottled. *Abdomen* brownish grey. *Legs* pale cinereous, the tarsi shaded with grey.

*Type* ♀ (66277, *Boquete*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66279) US. Nat. Mus.]

*Hab.* Central America—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Boquete, 3500 ft., VIII. 1881 (*G. C. Champion*). Two specimens.

BIOL. CENTR.-AMER., Heter., Vol. IV., April 1914.

2 nn



9. **Polyortha tersa**, sp. n. (Tab. VIII. fig. 14.)

*Antennae* tawny grey, spotted above with fuscous. *Palpi* hirsute above and beneath, extending more than the length of the head beyond it; dark tawny, with some paler speckling at the sides; terminal joint naked, tipped with whitish. *Head* dark tawny, with paler speckling. *Thorax* dark tawny; tufted behind. *Forewings* rather narrow in proportion to their length, termen slightly sinuate below the apex; dark tawny, with a white mediocostal patch, in which is a tawny shade and some tawny scales on the margin—this patch is semiovate and extends to the lower edge of the cell; the dark portion of the wing shows about five strong tufts of raised scales, of which the most conspicuous are on the fold and above the commencement of the dorsal cilia; cilia tawny, with slight purplish grey sheen. *Exp. al.* 16 mm. *Hindwings* greyish fuscous; cilia paler. *Abdomen* ochreous. *Legs* shining, white, with tawny tarsal bands.

*Type* ♂ (66278) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., VIII–IX. 1880 (*G. C. Champion*). Unique.

10. **Polyortha euchlorana**, sp. n.

*Antennae* pale ochreous, dotted with fuscous. *Palpi* projecting the length of the head beyond it, median joint hirsute, terminal joint naked; bright green. *Head* and *Thorax* bright green; the latter tufted behind. *Forewings* slightly sinuate below the depressed apex, somewhat narrower than is usual in this genus; bright green, with a broad, mottled, fuscous band crossing the wing at two-thirds, obliquely parallel with the termen; this band contains some tawny grey shading on its dorsal, and some black streaklets on its costal half—two small tawny fuscous costal spots lie between it and the base, some black scales lying also on the costa between them; the wing-surface exhibits several patches of strongly raised scales, at least three on the green basal half, and two on the darker transverse band, conforming in each case to the colour on which they are set; cilia bright green above and beneath; underside dusky, with the exception of some ochreous speckling along the costa and their bright green cilia. *Exp. al.* 12 mm. *Hindwings* 1; tawny grey; with a pale slender line at the base of the grey cilia; underside dusky. *Abdomen* tawny grey. *Legs* pale cinereous.

*Type* ♀ (66280) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66281) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa III. (*H. H. Smith*). Two specimens.

A very small and beautiful species—quite distinct.

11. **Polyortha dolosa**, sp. n.

*Antennae* fawn-brown. *Palpi* extending scarcely the length of the head beyond it, the median joint thickly clothed beneath, the terminal short obtuse; fawn-brown. *Head* and *Thorax* fawn-brown. *Forewings* with the costa abruptly arched at the base, ciliate from the humeral angle outward; fawn-brown, with a slight rosy tinge, a series of small black marginal spots along the rounded apex and convex termen, a blackish spot on the cell a little beyond its middle; there are also one or two black scales beyond the end of the cell and on the costa, with a thin and scattered sprinkling of bright chestnut scales, especially about the tornus; cilia concolorous with the wings. *Exp. al.* 14 mm. *Hindwings* brownish fuscous; cilia pale cinereous, brownish grey on their basal half. *Abdomen* rather shining brownish. *Legs* shining, pale fawn.

*Type* ♂ (66283, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66284) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879–90 (*G. C. Champion*). South America—COLOMBIA: CUNDINAMARCA: Bogota (*Birchall*). Three specimens.

Very similar to *Tortrix apatela* Wlsm. (p. 289), but easily separable by the neuration.

(FW: 7 to costa, 3-4 stalked), by its darker hindwings, and by the cilia of the forewings not being whitish.

12. *Polyortha suffalcata*, sp. n. (Tab. VIII. fig. 15.)

*Antennae* ochreous. *Palpi* ochreous, sprinkled with reddish fawn; the rather long terminal joint smoother than in the larger species of the genus. *Head* and *Thorax* ochreous, the latter spotted with reddish fawn. *Forewings* with the costa convex, slightly flattened about the middle, the termen distinctly sinuate below the apex; ochreous, smeared and mottled with reddish fawn; with an irregular sub-oblique band of pale leaden grey, crossing the cell a little before the middle, a small patch of leaden grey scaling also, beyond the upper angle of the cell in the direction of the apex; a broken line of black scale-dots follows the fold from the base, as far as a raised patch of ochreous scales above the dorsum at two-thirds; some more black scaling lies below the costa, near the base, and along the inner edge of a roughly triangular pale apical patch tapering to the middle of the termen; cilia reddish fawn, mixed with ochreous and some fuscous scales. *Exp. al.* 15 mm. *Hindwings* and *Abdomen* reddish brown. *Legs* pale ochreous.

*Type* ♀ (66282) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800-1000 ft., 1881-3 (*G. C. Champion*).  
Unique.

TORTRICODES Gn.

*Type*: *Tinea tortricella* Hb. (= *hyemana* Hb.; Dbld. 1849).

TORTRICODES Gn. Ann. Soc. Ent. Fr. 14 (2 s. 3: 1845) 305 no. 2 (1845): Eur. Micr. Ind. Meth. 67 no. 2 (1845); Wlsm. Ent. Mo. Mag. 43 193-5 (1907); Frnld. Gn. Tortr. 34, 59 (1908).

1. *Tortricodes placita*, sp. n. (Tab. VIII. fig. 16.)

*Antennae* brownish grey. *Palpi* short, porrect, reaching a little beyond the head, the median joint slightly roughened above towards its apex; terminal joint shorter than the median, smooth, obtuse; brownish externally. *Head* and *Thorax* griseous; the head slightly roughened posteriorly. *Forewings*, with the costa strongly arched, apex somewhat obtuse, termen oblique, tornus rounded; hoary grey, with three brown patches, each margined, or speckled, with slightly raised dark umber-brown scale-spots—the first small, at the extreme base of the costa; the second large, obliquely quadrate, on the costa at about one-fifth from the base; the third, on the fold at the commencement of its outer third, from this a line of dark brown dots curves back to the costa, a few brown scales lying on the dorsum below it; the costa is slightly speckled with brown, a faint brownish suffusion pervading its outer half; the wing-surface is sparsely speckled with dark brown scale-dots, especially beyond the cell; cilia hoary grey. *Exp. al.* 18 mm. *Hindwings* 1; light greyish brown. *Abdomen* shining, pale cinereous. *Legs* pale cinereous.

*Type* ♂ (66555) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

TORTRIX L.

*Type*: *Phalaena Tortrix viridana* L. (Blmbch. 1779).

PHALAENA TORTRICES (TORTRIX) L. Syst. Nat. (ed. 10) 1 496, 530-2 no. 205·4 sp. 202-25 (1758); Blumenbach HB. Naturges. 1 367, 371 no. 45 e. sp. 17 (1779). TORTRIX Toerner, Thnbg. Diss. Ac. Upsal. 3 259 (1801); Wlsm. & Drnt. Ent. Mo. Mag. 33 39-40 (1897); Frnld. Gn. Tortr. 1-3, 53-4 (1908).

### 1. *Tortrix piriferana* Z.

*Grapholitha piriferana* Z. Hor. Soc. Ent. Ross. 13 158-9 sp. 3 (1877)<sup>1</sup>.

Type ♂ (100 Wlsm. Det. 1892) Mus. Stgr.

*Hab.* Central America—GUATEMALA: SOLOLA: Volcan de Atitlan, 2500-3500 ft., XII. 1880 (G. C. Champion)—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Chiriqui (H. Ribbe)<sup>1</sup>: PANAMA: Panama (W. Schaus).

The type of this species is a ♂ belonging to the group *Anacrusis* Z.—founded on the ♀.

### 2. *Tortrix nephrodes*, sp. n.

*Antennae* brownish fuscous. *Palpi* ferruginous. *Head* and front of *Thorax* dark brownish ferruginous; the latter greyish cinereous posteriorly. *Forewings* with costa much arched near base, straightened beyond, termen deeply sinuate below apex, bulging outward below the middle; brownish cinereous, freckled, especially beyond the middle, with darker brownish reticulations; a dark umber-brown band, leaving the costa obliquely outward before the middle, forms an angle below the outer third of the cell, and is produced outward and upward to beyond the upper angle of the cell, where it is abruptly terminated at its indented apex by a white spot, the space between it and the costa being somewhat shaded with paler brownish; below and beyond the lower angle of the cell, on vein 4, is an oblique, kidney-shaped, dark umber-brown spot, another small spot of the same colour occurring at the extreme apex; cilia brownish cinereous, with a slight darker shade along their base. *Exp. al.* 31-45 mm. *Hindwings* dark brownish fuscous; a reddish brown shade-line near the base of the pale brownish cinereous cilia. *Abdomen* dark brownish fuscous. *Legs* brownish cinereous.

Type ♀ (66558, V. de Chiriqui) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66557) US. Nat. Mus.]

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000-5000 ft., VIII-IX. 1880 (G. C. Champion)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (G. C. Champion). Two specimens.

Closely allied to *atrosparsana* Z., but differing in the wider dark subcostal band, in the smaller white spot not enclosing a dark nucleus, and in the reniform, or geminate, not simple spot above the tornus—also in the much darker hindwings.

### 3. *Tortrix cordigera*, sp. n. (Tab. VIII. fig. 17.)

*Antennae* biciliate  $\frac{1}{2}$ ; cinereous. *Palpi* projecting less than the length of the head beyond it; brownish. *Head* and *Thorax* pale mouse-grey. *Forewings* with the costal half shining, pale mouse-grey to three-fourths, with two large reddish ferruginous dorsal patches, the first below the fold, near the base, sending a short pointed excrescence obliquely upward across the cell; the second three times as large, kidney-shaped, extending to beyond the tornus, bulging upward over the upper angle of the cell, bounded at its outer edge by an obliquely curved band of the grey ground-colour, which reverts around its outer extremity to the tornus; this is margined again by a reddish ferruginous shade, opposite the termen, separating it from the grey apex; cilia shining, mouse-grey. *Exp. al.* 19 mm. *Hindwings* shining, aeneous, with opalescent tints; cilia shining, whitish. *Abdomen* shining, whitish; anal tuft ochreous. *Legs* whitish; spurs and tarsal joints tinged with brown.

Type ♂ (66559) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (G. C. Champion). Unique.

#### 4. *Tortrix apertana*, sp. n.

*Antennae* shortly ciliate in the ♀, probably much more strongly in the ♂; pale rust-brown. *Palpi* pale rust-brownish. *Head* pale creamy ochraceous. *Forewings*, with the costa very slightly depressed beyond the middle, apex produced, termen concave below the apex, tornus rounded; pale creamy ochraceous, minutely reticulate throughout with sinuate, irregular, pale rust-brownish lines; at one-fifth from the base is a slender, outwardly oblique, inconspicuous, brownish costal streak, vanishing on the cell; this is followed, at about the middle, by a slightly wider parallel streak descending to the lower angle of the cell, where it becomes furcate and is deflected downward to the dorsum in two very slender lines, scarcely distinguishable from surrounding lines of reticulation; at two-thirds is a shorter parallel streak, followed by three or four small rust-brown marginal spots; apical and terminal cilia reddish brown; underside rather darker, subreticulate, with four small fuscous costal spots beyond the middle. *Exp. al.* 34 mm. *Hindwings* straw-whitish, with slight pale fuscous speckling beyond the middle; cilia whitish, with six or seven small fuscous dots at their base along the termen. *Abdomen* pale bone-grey. *Legs* pale ochraceous, slightly stained with brownish.

*Type* ♀ (4668) Mus. Wlsm. BM. [PT. (4669) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft. (*W. Schaus*). Three specimens.

#### 5. *Tortrix millistriata*, sp. n.

*Antennae* ♂ strongly biciliate 4; dull ochreous. *Palpi* dull ochreous, terminal joint fuscous. *Head* ochreous. *Thorax* white. *Forewings* shining, white; with innumerable, short, transverse black streaklets, evenly and thickly distributed over the whole surface, one short one, only, crossing these, pointing inwards from the extreme apex; the costa is narrowly bright golden yellow; cilia bright golden yellow. *Exp. al.* 30 mm. *Hindwings* white, sparsely speckled with black, more especially along the costa and termen; cilia white, with a yellow line near their base. *Abdomen* fuscous; anal tuft bright ochreous. *Legs* bright ochreous.

*Type* ♂ (4687, *Las Vigas*); ♀ (66505, *Real del Monte*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (6046 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft. (*W. Schaus*); HIDALGO: Real del Monte (*M. Trujillo*): MEXICO: Popocatepetl, 9500–11,500 ft., VI. 1906 (*W. Schaus*).

#### 6. *Tortrix animosana* Busck.

*Tortrix animosana* Busck Jr. NY. Ent. Soc. 15 235–6 (1907)<sup>1</sup>.

*Type* ♂ (10926) U.S. Nat. Mus.

*Hab.* Central America—MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Jalapa (*W. Schaus*<sup>1</sup>; *M. Trujillo*); Orizaba (*W. Schaus*)<sup>1</sup>—GUATEMALA: GUATEMALA: Guatemala City (*J. Rodriguez*).

#### 7. *Tortrix sarothrura* F. & R.

= *auricomana* Busck.

*Tortrix* ? *sarothrura* F. & R. Reise Nov. Zool-Lp. 2 Pf. 139·33 (1875)<sup>1</sup>. *Tortrix* (*Lophoderus* ?) *sarothrura* Z. Hor. Soc. Ent. Ross. 13 105–6 (1877)<sup>2</sup>. *Tortrix auricomana* Busck Jr. NY. Ent. Soc. 15 236 (1907)<sup>3</sup>.

*Types* ♂ ♀ (*sarothrura* F. & R. ♀, *Chapultepec*, 1913:86) Roths. Coll. (*Flbr. Coll.*) BM.; (*auricomana* Busck ♂ ♀, 10927) US. Nat. Mus..

*Hab.* Central America—MEXICO<sup>1-3</sup>: VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*): MEXICO<sup>3</sup>: Mexico City, V–VI. (*R. Müller*)<sup>3</sup>: MICHOACAN<sup>1</sup>: Chapultepec, VI<sup>m</sup>. (*Hedemann*)<sup>1</sup>—GUATEMALA: GUATEMALA: Guatemala City (*J. Rodriguez*).

### 8. *Tortrix chaldera* Druce.

*Grammophora chaldera* Druce Biol. C-Am. Ins. Lp-Het. 1 259 (V. 1889), Pf. 26·5 (VII. 1839) <sup>1</sup>.

Type ♂ (1899:53) Godm-Salv. Coll. BM.

Hab. COSTA RICA <sup>1</sup>: Volcan de Irazu, 6000 ft. (*H. Rogers*) <sup>1</sup>.

This species, described as belonging to the *Noctuidae* (*Bryophilidae*), must be removed to *Tortrix* L. (*Eulia* Hb.), with which it agrees in neuration (FW: 12 veins, all separate, 7 to termen. HW: cubitus impectinate; 8 veins, 6-7 separate, but closely approximate basally; 3-4 connate, 5 approximate to 4. *Thorax* tufted posteriorly).

### 9. *Tortrix chloantha*, sp. n.

*Antennae* cinereous. Palpi ascending, not reaching above the vertex, terminal joint about one-third median, both very sparsely clothed; cinereous. *Head* pale cinereous. *Thorax* whitish grey, the tegulae sprinkled with brilliant green scales on a black ground. *Forewings* somewhat broad, the costa slightly arched, termen not oblique, scarcely sinuate below the apex; with dark brownish fuscous, almost black, patches on a shining white ground-colour, profusely sprinkled with elongate brilliant green scales; the black and green patches and mottling prevail over the greater part of the wing, the pale ground-colour appearing between them in waved lines and bands, of which the most conspicuous are from the costa before the middle, from the costa beyond the middle, running to the tornus, and from the apex, reverting downward to the termen; the only dark fuscous patch which is not sprinkled with green occurs beyond the end of the cell; cilia whitish, with a fuscous shade near their base. *Exp. al.* 36 mm. *Hindwings* brownish grey; cilia paler. *Abdomen* grey. *Legs* pale cinereous.

Type ♀ (66512) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

Hab. MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 7000 ft., VI. (*H. H. Smith*). Unique.

Allied to *chaldera* Druce, but the markings are somewhat differently placed, and the white patches which are so conspicuous in *magicana* Z. and *chaldera* Druce are absent in this species.

### 10. *Tortrix magicana* Z.

*Penthina* (*Sericoris*) *magicana* Z. Stett. Ent. Ztg. 27 150-1 sp. 11 Pf. 1·9 (1866) <sup>1</sup>.

Type ♀ Kaden Coll.

Hab. AMERICA, C-S. Central America—COSTA RICA: Juan Viñas (*W. Schaus*). South America—COLOMBIA (*Kaden*) <sup>1</sup>—BRAZIL: RIO DE JANEIRO: Petropolis, 1881 (*H. Doer*).

### 11. *Tortrix biocellata*, sp. n. (Tab. VIII. fig. 18.)

*Antennae* ciliate  $1\frac{1}{2}$ ; ochreous. Palpi projecting the length of the head beyond it; ochreous. *Head* ochreous. *Thorax* ferruginous. *Forewings*, with the costa slightly arched towards the base, apex rounded, termen oblique; whitish ochreous, striated on the basal half, and suffused on the outer half with leaden grey; with two conspicuous, circular, tawny ferruginous spots, narrowly pale-margined, the first large, touching the costa slightly beyond the middle and extending to the lower angle of the cell; the second smaller, situated halfway between the first and the middle of the termen; cilia whitish ochreous, a few fuscous scales lying at their base along the termen. *Exp. al.* ♂ 13·5, ♀ 20 mm. *Hindwings* pale greyish



fuscous, slightly mottled around the margin; (in the ♀ darker than in the ♂); cilia paler, with a slight ochreous tinge. *Abdomen* whitish ochreous. *Legs* whitish, the tarsi faintly grey-speckled. *Type* ♀ (66513); ♂ (66514) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM**.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

## 12. *Tortrix ponera*, sp. n.

*Antennae* rather densely biciliate; fuscous. *Palpi* porrect, extending rather more than the length of the head beyond it; brownish cinereous, the median joint moderately clothed above and beneath; terminal joint smooth, about two-thirds the length of the median. *Head* and *Thorax* brownish cinereous. *Forewings* narrow, elongate, with slightly convex costa, rounded apex, and scarcely sinuate, oblique termen; coppery reddish, with a pale, silvery, greyish white streak commencing at the base, slightly widened outward along the cell, where its upper edge is slightly angulated about the middle, and fading out a little beyond the end of the cell, in the direction of the termen below the apex; along the upper edge of the cell, and along the costa before the apex, the tawny red tinge is rather intensified, as also in a small patch about the lower angle of the cell; cilia pale silvery greyish, with a slightly darker shade, preceded by a slender whitish line along their base. *Exp. al.* 25 mm. *Hindwings* very pale brownish grey; cilia even paler. *Abdomen* greyish. *Legs* whitish cinereous.

*Type* ♂ (6047 Wlsm. Det. 1908) US. Nat. Mus. [*PTT* (33946-7) Mus. Wlsm. **BM**.]

*Hab.* MEXICO; MEXICO: Popocatepetl, 13,000 ft., VI. 1906 (*W. Schaus*). Four specimens.

The specimens are not in very good condition.

## 13. *Tortrix dichroaca*, sp. n.

*Antennae* biciliate 1; dull brownish ochreous. *Palpi* projecting the length of the head beyond it; dull brownish. *Head* dull brownish ochreous. *Thorax* tawny chestnut. *Forewings* divided into two equal parts by an oblique rich chestnut-brown fascia, from before the middle of the costa to beyond the middle of the dorsum, somewhat dilated outward on its lower half, its inner edge moderately straight, its outer edge sinuate, both narrowly margined by ochreous lines; before this fascia the basal half of the wing is dull leaden grey, with a faint indication of a basal patch containing chestnut-brown spots and streaks, especially below the fold; beyond the fascia the outer half is pinkish fawn-colour, with a triangular rich chestnut-brown costal patch, halfway between the fascia and the apex; cilia corresponding in colour to the outer half of the wing, but containing a dark grey patch below the apex, and tending to become ochreous at the tornus. *Exp. al.* ♂ 17.5, ♀ 19 mm. *Hindwings* and cilia dirty whitish, with some faint grey shades and mottling. *Abdomen* and *Legs* whitish cinereous.

*Type* ♂ (66526); ♀ (66527) *Rio Sucio*, Mus. Wlsm. (*Godm-Salv. Coll.*) **BM**. [*PTT* (66532, 66536-7, 66542) US. Nat. Mus.]

*Hab.* Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*)—COSTA RICA: *Rio Sucio* (*H. Rogers*); *Volcan de Irazu* 6000-7000 ft. (*H. Rogers*). Twenty-six specimens.

## 14. *Tortrix impositana*, sp. n.

*Antennae*, *Palpi*, *Head* and *Thorax* fawn-ochreous; the latter with posterior tuft of raised brown scales. *Forewings* with the costa arched at the base, slightly sinuate beyond the middle, termen sinuate; fawn-ochreous, with fawn-brown markings; a brownish shade on the lower half of the base, with a conspicuous, truncate, blackish dorsal patch, reaching from the flexus to one-third, seeming to indicate the remains of the usual basal patch, limited by a slender outwardly oblique line from the costa at about one-fourth; an oblique fascia commences on the middle of the costa, its outer side only being darkly shaded up to the costa, its inner width indicated by a slender line; on the cell the brown shade becomes widened and continues of even width to the dorsum before the tornus, where it carries some black sprinkling; before

the apex a brown costal triangle throws out one or more sinuous lines passing through a group of black dots a little above the middle; a brown line along the termen precedes the brown cilia; underside speckled about the costa and apex. *Exp. al.* 21 mm. *Hindwings* pale cinereous, slightly shaded and dappled around the apex with pale greyish fuscous; underside speckled about the costa and apex. *Abdomen* greyish ochreous. *Legs* pale ochreous.

*Type* ♀ (65962, *Senahu*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65963) US. Nat. Mus.]

*Hab. Central America*—MEXICO: VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*)—GUATEMALA: VERA PAZ: *Senahu* (*G. C. Champion*): SOLOLA: Volcan de Atitlan, 2500–3500 ft., XII. 1880 (*G. C. Champion*). Three specimens.

### 15. *Tortrix montezumae*, sp. n.

*Antennae* ochreous. *Palpi* pale chestnut-brown at their outer sides, ochreous above. *Head* brownish ochreous. *Thorax* ochreous, mottled with brownish, the tegulae rather shining, whitish ochreous; a pale chestnut-brown crest posteriorly. *Forewings* ochreous, the interspaces between the darker chestnut-brown markings having a shining gloss; the darker markings are:—first, an irregular, somewhat mottled basal patch, slightly wider on the dorsum than on the costa, its outer edge slightly convex and ill-defined, reaching to one-fourth from the base; secondly, an outwardly oblique fascia leaving the costa before the middle, dilated outward below the middle, but touching the dorsum beyond the middle only at its inner edge, its inner margin indented within the upper edge of the cell by a pale, shining, dark-centred, ocelloid spot of the lighter ground-colour, followed by some fuscous scaling; beyond this fascia is a dark, chestnut-brown, triangular costal patch, with a dilute sinuate shade below it tapering to the tornus; a small dark costal spot precedes the apex, with a faint sinuate shade almost touching the termen above the middle; the pale interspaces show slender dividing shade-lines toward the costa; cilia shining ochreous. *Exp. al.* 16–18 mm. *Hindwings* shining, pale brownish grey, very faintly reticulate at the apex, more distinctly so on the underside; cilia shining whitish. *Abdomen* ochreous. *Legs* whitish ochreous, tarsi faintly spotted.

*Type* ♂ (65964, *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (4701–2, 4709; 5953 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*); Orizaba (*W. Schaus*): MEXICO: Popocatepetl, 8000 ft., VI. 1906 (*W. Schaus*): GUERRERO: *Amula*, 6000 ft., VIII. (*H. H. Smith*). Ten specimens.

This species is extremely similar to *velutinana* Wkr., but it is a little larger, and the hindwings are paler—less uniformly clouded.

### 16. *Tortrix guatemalica*, sp. n.

*Antennae* cinereous, speckled at the base. *Palpi* stone-grey, speckled with brownish fuscous. *Head* and *Thorax* brownish grey. *Forewings* silvery grey, with a slight ochreous suffusion on the basal half, some brownish fuscous speckling along the costa, and a brownish fuscous shade along the dorsum; an oblique, median, brownish fuscous fascia is dilated outward on the cell, and along the dorsum toward the tornus, but is less conspicuous in colour than the triangular, rust-brown, costal patch which precedes the apex; some brownish fuscous speckling above the termen precedes the mixed whitish ochreous and pale ferruginous cilia. *Exp. al.* 23 mm. *Hindwings* shining, greyish white, with an opalescent reflection—speckled with fuscous along the costa on the underside; cilia shining, whitish, with a slight ochreous tinge. *Abdomen* silvery grey, anal tuft ochreous. *Legs* whitish ochreous.

*Type* ♀ (65969, *Totonicapam*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65970) US. Nat. Mus.]

*Hab. Central America*—GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*)—COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)

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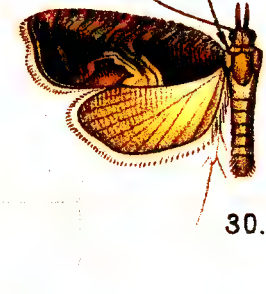
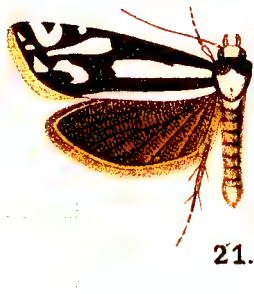
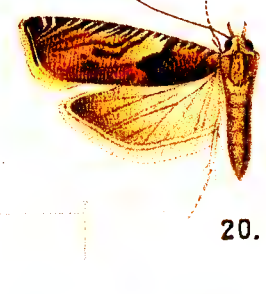
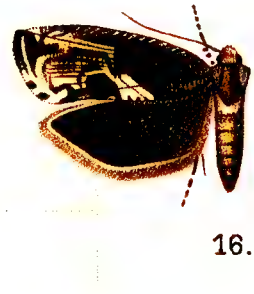
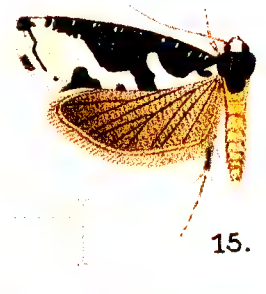
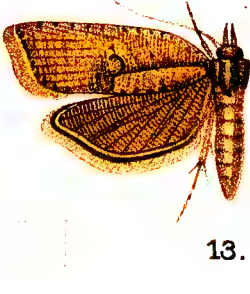
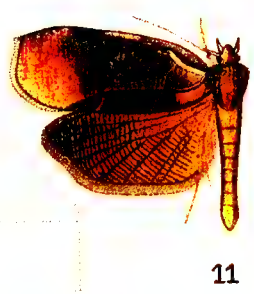
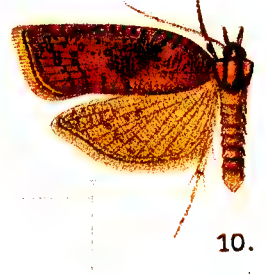
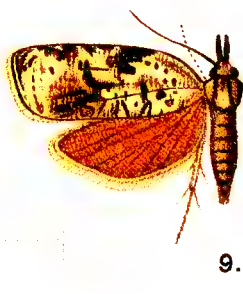
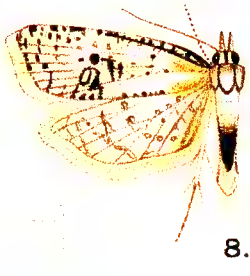
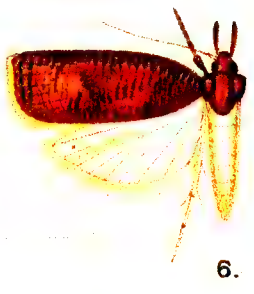
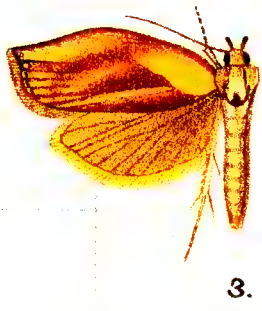
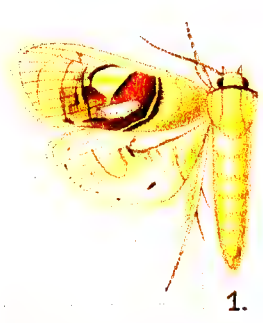
**TINEINA.**

PLATE VII.

**ARRHENOPHANIDAE, SPARGANOTHIDAE, OLETHREUTIDAE.**

ARRHENOPHANIDAE, STARGANOPHANIDAE, CLEPTOPHANIDAE, and CYDIDAE			Page
Fig.			
1.	<i>Arrhenophanes</i> (= * <i>Parathyris</i> ) } (♂ 33930) . . . . .	{ St. Jean, Rio Maroni, French Guiana . . . . .	205
	<i>perspicilla</i> Stoll. . . . .		
2.	<i>Arrhenophanes volcanica</i> Wlsm. - - (Type ♀ 66457)- - - - -	V. de Chiriqui, Panama - - - - -	206
3.	<i>Aesiocopa vacivana</i> Z. . . . . (♀ 66308) . . . . .	Bugaba, Panama . . . . .	207
4.	<i>Atteria drucei</i> Wlsm. - - - - - (Type ♀ 6150, Mus. Druce) - - - - -	Chiriqui, Panama - - - - -	214
5.	<i>Homona sebasta</i> Wlsm. . . . . (Type ♂ 66375) . . . . .	Totonicapam, Guatemala . . . . .	208
6.	<i>Epagoge spadicea</i> Wlsm. - - - - (Type ♀ 66391)- - - - -	Omilteme, Mexico- - - - -	212
7.	<i>Epagoge flaviciliana</i> Wlsm. . . . . (Type ♀ 66396) . . . . .	V. de Irazu, Costa Rica . . . . .	213
8.	<i>Platynota albescens</i> Wlsm. - - - - (Type ♂ 66350)- - - - -	Amula, Mexico - - - - -	218
9.	<i>Platynota subargentea</i> Wlsm. . . . (Type ♀ 67069) . . . . .	Caché, Costa Rica . . . . .	216
10.	<i>Amorbia castanea</i> Wlsm.- - - - - (Type ♂ 66361)- - - - -	Cerro Zunil, Guatemala - - - - -	220
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15.	<i>Eucosma cittopa</i> Wlsm. . . . . (Type ♂ 4699) . . . . .	Las Vigas, Mexico . . . . .	234
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19.	<i>Eucosma cerdalea</i> Wlsm. . . . . (Type ♂ 66470) . . . . .	V. de Irazu, Costa Rica . . . . .	236
20.	<i>Eucosma trimarginata</i> Wlsm.- - - (Type ♀ 66471)- - - - -	{ Sierra delas Aguas Escondidas, Mexico - - - - -	235
21.	<i>Eucosma alphabetica</i> Wlsm. . . . . (Type ♂ 6011, US. Nat. Mus.) . . . . .	Popocatepetl, Mexico . . . . .	236
22.	<i>Eucosma aporema</i> Wlsm.- - - - - (Type ♀ 66485)- - - - -	V. de Irazu, Costa Rica - - - - -	235
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27.	<i>Ctenopseustis flavicirrata</i> Wlsm. . . (Type ♀ 66498) . . . . .	Jalapa, Mexico . . . . .	253
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—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*).  
Three specimens.

Very near 5375 *virescana* Clem., but larger, and with paler hindwings.

**17. Tortrix urbana** Busck.

*Tortrix urbana* Busck Pr. Ent. Soc. Wash. 14: 1912 86 (1912) <sup>1</sup>.

Type ♂ (14526) US. Nat. Mus. [*PTT.* (33919–20) Mus. Wlsm. BM.]

*Hab.* MEXICO<sup>1</sup>: MEXICO<sup>1</sup>: Mexico City (*R. Müller*)<sup>1</sup>, VII. 1909, XI. 1911 (*R. Müller*).

**18. Tortrix heureta**, sp. n. (Tab. VIII. fig. 19.)

*Antennae* (broken), biciliate 1 in the ♂; rusty reddish at the base. *Palpi* projecting the length of the head beyond it, moderately clothed, the terminal joint depressed; ferruginous externally, paler on their inner sides. *Head* and *Thorax* ferruginous. *Forewings* shining, silvery grey; suffused and blotched irregularly with bright reddish ferruginous, forming a basal patch, broken on the fold, an oblique central fascia, broken on the cell, but dilated outward above and below it, and a subapical band reaching the lower half of the termen and dilated in the form of a dark triangular costal shade before the apex; cilia shining, whitish, mottled with grey on the lower half, and suffused with pale ferruginous on the apical half of the margin. *Exp. al.* 24 mm. *Hindwings* greyish white, the veins marked out by lines of brownish grey scales; cilia shining, whitish. *Abdomen* greyish fuscous. *Legs* whitish ochreous, the tarsi tinged with ferruginous.

Type ♂ (67072, Quiché Mts.) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879–80 (*G. C. Champion*):  
QUICHÉ: Quiché Mts., 7000–9000 ft., VIII. 1880 (*G. C. Champion*). Two specimens.

**19. Tortrix hirsutipalpis**, sp. n. (Tab. VIII. fig. 20.)

*Antennae* notched and ciliate 1; cream-coloured, spotted with brown above throughout. *Palpi* stretching more than twice the length of the head beyond it; with long scales above and beneath; pale creamy, slightly shaded with brown. *Head* and *Thorax* cream-colour. *Forewings* much mottled with pale and dark fawn-brown, becoming almost umber-brown in a broad transverse shade beyond the middle; three patches, two costal and one dorsal, with a spot at the apex, all cream-colour, with some brownish speckling; numerous patches and bands of shining metallic steel-grey are scattered about the darker portions of the wing, and two or three shining brassy yellow spots are contiguous to the lower half of the termen; cilia cream-colour, shaded with brownish near their base—at the tornus greyish fuscous. *Exp. al.* 18 mm. *Hindwings* and cilia greyish white, a few fuscous scales before the apex; shaded with fuscous along the costa beneath. *Abdomen* and *Legs* whitish.

Type ♂ (67074) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Unique.

**20. Tortrix endela**, sp. n. (Tab. VIII. fig. 21.)

*Antennae* ♂ notched and biciliate  $\frac{1}{2}$ ; cream-colour, dotted with brownish near the base. *Palpi* smooth, stretching scarcely more than the length of the head beyond it, terminal joint short; cream-colour, speckled with brownish externally. *Head* and *Thorax* cream-colour. *Forewings* fawn-brown, with a quadrate costal blotch, a small basal spot and the apical portion of the costa, with a patch beyond the

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2 00



end of the cell cream-coloured—the whole overrun by shining leaden grey mottling; cilia and the extreme edge of the termen cream-coloured. *Exp. al.* 18 mm. *Hindwings* shining, whitish; cilia slightly cream-coloured, dusted with brownish at the extreme apex beneath. *Abdomen* whitish; anal tuft and *Legs* cream-coloured.

*Type* ♂ (67075) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: QUICHÉ: Quiché Mts., 7000–9000 ft. (G. C. Champion).  
Unique.

### 21. *Tortrix smicrotes*, sp. n.

*Antennae* pale fawn-ochreous. *Palpi* projecting a little beyond the head; pale fawn-ochreous. *Head* pale fawn-ochreous. *Thorax* pale fawn-ochreous, with a brownish tinge. *Forewings* pale fawn-ochreous; a short basal patch including the costal fold, an oblique median fascia, dilated outward on and below the cell, and a small postmedian costal patch greyish fawn—the latter sending out some fawn-grey lines across the apical portion of the wing, which contains a few shining scales; cilia pale fawn-ochreous. *Exp. al.* ♂ 15 mm.; ♀ 17.5 mm. *Hindwings* pale greyish, tending to pale ochreous about the apex; cilia scarcely paler than the wings. *Abdomen* greyish, anal tuft ochreous. *Legs* whitish ochreous.

*Type* ♀ (66516); ♂ (66515) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66517) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (H. H. Smith). Five specimens.

### 22. *Tortrix metalleta*, sp. n.

*Antennae* ciliate  $\frac{1}{2}$ ; brownish ochreous, spotted above with fuscous. *Palpi* projecting the length of the head beyond it; brownish ochreous. *Head* and *Thorax* yellowish brown. *Forewings* with a strong costal fold in the ♂; yellowish brown, spotted with shining leaden grey metallic scales, forming scattered spots on the basal half and waved transverse lines of spots on the outer half—so far as the general direction of these can be traced, the more conspicuous are an outwardly curved line arising from the middle of the costa, forked at the end of the cell, and reaching the dorsum before the tornus in two places; a shorter oblique line from the costa beyond this, and a third line running nearly parallel to the termen, but the direction and distribution of the lines of spots appears to be somewhat irregular; some very small similar metallic spots lie on the margin at the base of the pale brownish ochreous cilia, which in some lights have a pinkish or lilac tinge. *Exp. al.* ♂ 15 mm.; ♀ 15.5 mm. *Hindwings* ♂ tawny grey; cilia paler; ♀ with the apex and apical cilia slightly tinged with ochreous. *Abdomen* tawny grey; anal tuft ochreous. *Legs* whitish ochreous.

*Type* ♂ (66520); ♀ (66521) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66524) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Five specimens.

### 23. *Tortrix triplagata*, sp. n. (Tab. VIII. fig. 22.)

*Antennae* brownish. *Palpi* pale ochreous, the median joint slightly shaded externally. *Head* whitish ochreous. *Thorax* reddish brown, the tegulae pale ochreous. *Forewings* whitish ochreous, shaded with pale fawn-ochreous, an oblique dorsal blotch before the middle, an outwardly oblique costal blotch about the middle, and a second smaller costal blotch before the apex—chestnut-brown, with a few fuscous scales around their edges; the dorsal blotch arises at about one-fourth from the base, is contracted on the fold and dilated outwards above it; the costal blotch terminates at the end of the cell, but emits a dark fawn-ochreous shade from its lower extremity to the termen above the tornus; cilia whitish ochreous. *Exp. al.* 11.5 mm. *Hindwings* greyish, with a slight rosy tinge; cilia very pale. *Abdomen* greyish ochreous. *Legs* whitish.

*Type* ♀ (66449) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (H. H. Smith). Unique.

## 24. *Tortrix nigrivelata*, sp. n. (Tab. VIII. fig. 23.)

*Antennae* light steel-grey. *Palpi* black, with some steel-grey scaling on the median joint. *Head* black. *Thorax* black, with a light steel-grey patch posteriorly. *Forewings* brownish ochreous, the extreme base black, forming a minute straight-edged basal patch; a rather pale chestnut brown fascia, of approximately even width throughout, descends from the middle of the costa obliquely outward to the dorsum before the tornus, its outer edge marked by a black dot on the costa and a line of black scales across the width of the cell, there is also a black costal spot before the apex, and a few black scales along the termen and on the extreme dorsum before the fascia; along the middle of the wing, not reaching the margins, the ground-colour is overlaid by a pale steely greyish sheen from the base to the fascia, and again beyond it where it is rather wider than the fascia itself, embracing the tornus but not affecting the apical area; cilia pale brownish ochreous. *Exp. al.* 8 mm. *Hindwings* distinctly narrower than the forewings; greyish fuscous, a pale ochreous line faintly indicated along the base of the greyish fuscous cilia. *Abdomen* greyish fuscous. *Legs* pale ochreous, the hind tarsi spotted with fuscous.

*Type* ♂ (6003, Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Unique.

This species is distinguished from *peritana* Clms. by its smaller size, and black head and thorax.

## 25. *Tortrix peritana* Clms.

=*inconclusana* Wkr.<sup>5</sup>

*Smicrotes peritana* Clms. Pr. Ac. Nat-Sc. Phil. 12 356 (1860)<sup>1</sup>. *Dichelia inconclusana* Wkr. Cat. Lp. BM. 28 318 sp. 8 (1863)<sup>2</sup>. *Smicrotes peritana* Wkr. Cat. Lp. BM. 30 993 sp. 1 (1864)<sup>3</sup>. *Tortrix peritana* Rhnsn. Tr. Am. Ent. Soc. 2 277 Pf. 6 · 52 (1869)<sup>4</sup>. "*Smicrotes*" *peritana* Wlsm. Ill. Typ. Lp-Het. BM. 4 21 (1879)<sup>5</sup>. *Tortrix peritana* Frnld. Tr. Am. Ent. Soc. 10 18 sp. 79 (1882)<sup>6</sup>: Bull. US. Nat. Mus. 52 483 sp. 5402 (1902)<sup>7</sup>.

*Types* ♂: *peritana* Clms., ♂ Mus. Am. Ent. Soc.; *inconclusana* Wkr., ♂ (1862: 85) BM.

*Hab.* AMERICA, N-C. United States<sup>1-7</sup>—ATLANTIC STATES<sup>7</sup>—MAINE<sup>6</sup>—NEW YORK<sup>4, 6</sup>—PENNSYLVANIA<sup>1, 4, 6</sup>—MARYLAND (*Mus. Joannis*)—DISTRICT OF COLUMBIA: Washington, 1. V. 1871 (*Wlsm.*)—NORTH CAROLINA: 1883 (*H. K. Morrison*)—TEXAS<sup>5</sup>: SW., 1884 (*H. K. Morrison*)—OREGON: JOSEPHINE: nr. Rogue River, V-VI. 1872 (*Wlsm.*)—CALIFORNIA: SAN FRANCISCO: San Francisco, 16. V. 1871 (*Wlsm.*): SONOMA: nr. Pluton Creek, 22-3. V. 1871 (*Wlsm.*): COLUSA: nr. Indian Valley, 28. VI. 1871 (*Wlsm.*); nr. South Fork of Stony Creek, 29. VI. 1871 (*Wlsm.*). Central America—MEXICO: VERA CRUZ: Orizaba, XII. 1887 (*F. D. Godman & O. Salvin*; *W. Schaus*): TABASCO: Teapa, II-III (*H. H. Smith*): GUERRERO: Amula, 6000 ft., VIII-IX (*H. H. Smith*)—GUATEMALA: CHILASCO: Santa Barbara, 4450 ft., 10. IX. 1879 (*G. C. Champion*)—COSTA RICA: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*).

## 26. *Tortrix minima*, sp. n. (Tab. VIII. fig. 24.)

*Antennae*, *Palpi*, *Head*, and *Thorax* fawn-grey. *Forewings* fawn-grey, with minute transverse greyish fuscous strigulae; a short oblique dorsal blotch at one-fourth, dark fuscous at its upper, brownish at its lower extremity; a less conspicuous greyish fuscous patch beyond the middle of the costa, slenderly dark-

margined at its inner edge, is followed by a similar patch nearer to the apex, along the inner edge of which runs a slender darker line which is continued downward nearly to the tornus, the space between it and the termen being also shaded with greyish fuscous; cilia fawn-grey, mottled with greyish fuscous. *Exp. al.* 10 mm. *Hindwings* pale smoky grey; cilia lighter, a slight shade running through them near their base. *Abdomen* and *Legs* smoky greyish.

*Type* ♂ (66592) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

## 27. *Tortrix hypocrita*, sp. n.

*Antennae* shining, pale cinereous. *Palpi* not projecting beyond the head; obtuse; dark fawn-brown. *Head* and *Thorax* dark fawn-brown. *Forewings*, costa somewhat convex, termen distinctly sinuate below the produced apex; pale reddish grey, with dark fawn-brown markings; a slender curved line, leaving the costa at one-fourth, ends in a tuft of projecting scales on the dorsum nearer to the base; beyond it, a little before the middle of the dorsum, arises a broader streak tending obliquely outward to the upper edge of the cell; an angulated streak before the apex, its upper half reaching the costa at one-fourth from the apex, its lower half nearly parallel with the termen but not reaching to the tornus; beyond this are three short costal streaks before the apex, and a few less conspicuous, short transverse striae are visible between the larger markings; cilia pale ochreous, mixed with fawn-brown, a dark line running along their base and overspreading them at the extreme apex. *Exp. al.* 14 mm. *Hindwings* pale, shining, greyish, much speckled and reticulated with darker shades; cilia shining, greyish, with a slight ochreous tinge. *Abdomen* pale fawn-brown. *Legs* whitish ochreous, with some darker tarsal shading.

*Type* ♂ (66593, *Cerro Zunil*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66594) US. Nat. Mus.]

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., 1880 (*G. C. Champion*): RETALHULEU: Las Mercedes, 3000 ft., 1880 (*G. C. Champion*). Two specimens.

In the specimen from Las Mercedes (66595 ♀) the paler ground-colour is almost entirely suffused with dark fawn-brown, obliterating the markings except the dorsal streak.

## 28. *Tortrix technema*, sp. n. (Tab. VIII. fig. 25.)

*Antennae* biciliate  $\frac{1}{2}$  in the ♂; cinereous. *Palpi* porrect; fawn-whitish, the terminal joint more than half as long as the median. *Head* fawn-whitish. *Thorax* very pale fawn; the tegulae with a small chocolate spot in front, whitish behind. *Forewings* shining, whitish, suffused across their middle with rosy lilac; with four conspicuous chocolate-brown patches, two costal, two dorsal, the first costal slightly before the middle, and the second dorsal before the commencement of the dorsal cilia, short and evenly quadrangular, an irregular curved spot of the same colour lying between them on the cell; the first dorsal, at one-fourth from the base, tending obliquely outward, irregularly quadrangular, sending an excrescence to the upper edge of the cell; the second costal patch, larger and irregularly quadrangular, tends obliquely inward, its outer edge parallel to the oblique termen; a few dark chocolate spots along the costa and some narrow streaks above the tornus; there is also a rosy lilac patch on the middle of the termen and a few golden yellow scales between the dorsal and costal patches, especially around their extremities; cilia yellowish white, broken by a dark grey patch about the middle of the outer margin. *Exp. al.* 18 mm. *Hindwings* shining, whitish, mottled and suffused with rosy grey; a thickened patch of ochreous scales between veins  $1^b$  and  $1^c$ ; underside much mottled, shining ivory-white. *Abdomen* fawn-whitish, with fringes of long scales above; anal tuft sooty grey. *Legs* shining ivory-white.

*Type* ♂ (66595) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*). Unique.

29. **Tortrix praecisana**, sp. n. (Tab. VIII. fig. 26.)

*Antennae* biciliate 2; fawn-white. *Palpi* fawn-white. *Head* white. *Thorax* fawn-white. *Forewings* fawn-white, with a nearly straight transverse fascia at one-fifth from the base, slightly bulged on its outer side above the middle, a triangular costal patch beyond the middle, and a small costal spot before the apex—black; cilia fawn-white. *Exp. al.* 12 mm. *Hindwings* white, with a slight fawn-grey suffusion towards the apex, mottled on the underside; cilia whitish. *Abdomen* fawn-white, transversely banded above with fuscous. *Legs* fawn-white.

*Type* ♂ (66450) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*). Unique.

30. **Tortrix arizonana** Wlsm.

*Sciaphila arizonana* Wlsm. Tr. Ent. Soc. Lond. 1884 124 Pf. 4·1 (1884)<sup>1</sup>. *Tortrix arizonana* Frnld. Bull. US. Nat. Mus. 52 484 sp. 5416 (1902)<sup>2</sup>.

*Type* ♂ (36576) Mus. Wlsm. BM.

*Hab.* AMERICA, N-C. United States<sup>1-2</sup>—ARIZONA<sup>1-2</sup>: 1882 (*H. K. Morrison*). Central America—MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*); Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*).

31. **Tortrix incana**, sp. n.

*Antennae* bifasciculate  $2\frac{1}{2}$  in the ♂, slightly serrate in the ♀; pale brownish cinereous. *Palpi* pale brownish cinereous, shaded with brownish fuscous on their outer sides. *Head* brownish cinereous. *Thorax* pale brownish cinereous, spotted on the tegulae and behind the middle with fuscous. *Forewings* with the costa very slightly convex, apex rounded, termen oblique, not sinuate; pale brownish cinereous, slightly mottled with brown and fuscous shading; a fuscous spot at the base of the costa and another, less conspicuous, above the flexus, are succeeded by fuscous marginal dots along costa and dorsum; a large mediocostal triangular fuscous patch, with obtusely truncate apex, is mottled within its margins by shades of bluish grey and followed by three more fuscous costal spots before the apex, of which the middle one is larger than the others, and somewhat quadrate, emitting from its outer edge a slender line of fuscous, edged with brown scaling, to the middle of the termen; cilia pale brownish cinereous, becoming brown around the apex, with two fuscous shade-lines running through them, the first broken into spots, the second continuous. *Exp. al.* 11–12 mm. *Hindwings* somewhat trapezoidal, but with obtuse apex and slightly sinuate termen; pale brownish grey; cilia whitish cinereous, with two slender faint shade-lines running through them. *Abdomen* brownish grey. *Legs* pale brownish fuscous, with pale cinereous spots on tibiae and tarsi externally, but wholly pale cinereous on their inner sides.

*Type* ♂ (66451); ♀ (66452) *Amula*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66453–4) US. Nat. Mus.; (3163, Wlsm. Det. 1898) Mus. Joannis.]

*Hab.* Central America—MEXICO: GUERRERO: *Amula*, 6000 ft., VIII–IX. (*H. H. Smith*)—COSTA RICA (*Mus. Joannis*). Six specimens.

32. **Tortrix parasema**, sp. n.

*Antennae* biciliate  $2\frac{1}{2}$ ; greyish fuscous, with some white speckling above. *Palpi* projecting fully the length of the head beyond it; white, thickly sprinkled with greyish fuscous externally. *Head* dull cream-whitish. *Thorax* white, profusely sprinkled with greyish fuscous. *Forewings* shining, white, with a small patch at the base of the costa, a narrow transverse fascia at one-fourth, a triangular medio-costal patch, and three costal spots before the apex—dark bluish grey, sprinkled and outlined with greyish

fuscous mixed with some ferruginous scales, a few smaller dark costal specks lie between the larger ones, and the wing-surface is sparsely streaked with pale ferruginous, in which are a few greyish fuscous scales, these becoming more prevalent along the dorsum and termen; cilia with an admixture of the three darker colours above mentioned, which gives them a greyish appearance, the white ground-colour not distinctly represented. *Exp. al.* 18 mm. *Hindwings* greyish, slightly mottled and shaded with fuscous; cilia slightly paler, with a dark dividing line near their base. *Abdomen* greyish. *Legs* whitish, speckled with grey.

*Type* ♂ (66601); ♀ (66602) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66605-6) US. Nat. Mus.]

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*). Seven specimens.

### 33. *Tortrix undata*, sp. n.

*Antennae* biciliate in the ♂; pale brownish. *Palpi* (broken). *Head* and *Thorax* white. *Forewings* shining, yellowish white, indistinctly marbled with small blotches of shining pale brownish ochreous, which colour is also mixed in a triangular, broken, mediocostal patch of black scaling, its inner edge somewhat more thickly black-sprinkled than its outer; along the extreme costa, before this, are several small spots of black scaling, two more occurring just before the apex, the termen being also sparsely irrorated with blackish scale-points; cilia white, irrorated with dark scaling, especially along their base and along their middle. *Exp. al.* 18 mm. *Hindwings* shining, sericeous whitish, profusely speckled with fuscous; cilia yellowish white. *Abdomen* greyish, anal tuft ochreous. *Legs* yellowish white.

*Type* ♂ (6043 Wlsm. Det. 1908) US. Nat. Mus. [PT. (33948) Mus. Wlsm. BM.]

*Hab.* MEXICO: MEXICO: Popocatepetl, 800-1000 ft., VI-VII. 1906 (*W. Schaus*). Two specimens.

### 34. *Tortrix scintillans*, sp. n.

*Antennae* strongly biciliate 4; cinereous. *Palpi* projecting twice the length of the head beyond it; speckled with brown at the sides, cream-white within. *Head* cream-white. *Thorax* cream-white, mixed with brownish ochreous. *Forewings* pale brownish ochreous, banded throughout by shining silvery grey sinuous metallic streaks; a faint indication of a triangular costal patch, containing a few blackish scales, has an elongate blackish patch at its lower extremity on the cell, and a few blackish scales are also grouped about the apex and upper half of the termen, some extending into the whitish ochreous cilia (a paler variety has the markings much less conspicuous). *Exp. al.* 17 mm. *Hindwings* shining white, with some greyish speckling around the margins; cilia with a slight ochreous tinge. *Abdomen* white, anal tuft ochreous. *Legs* white, speckled with greyish fuscous.

*Type* ♂ (66608) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66609) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*). Two specimens.

### 35. *Tortrix anotera*, sp. n.

*Antennae* ♂ biciliate 2; brownish externally, whitish cinereous on their inner surface. *Head* and *Thorax* brownish cinereous. *Forewings* with the costa slightly convex, termen oblique, scarcely sinuate; pale cinereous, profusely and evenly speckled throughout with fawn-brown, of which there is a series of small dots along and beyond the middle of the dorsum; a triangular patch on the middle of the costa, diluted except at its margins, its truncate apex resting on the internal vein of the cell; a few small costal spots before and behind this, the latter larger than the former, the intermediate spaces between them being of the pale ground-colour; cilia pale cinereous, with a narrow brown line along their base; underside brownish grey, not reticulate. *Exp. al.* 16-17 mm. *Hindwings* with the apex rounded, termen



slightly sinuate; ashy white, faintly speckled with brownish grey around the apex, along the upper edge of the cell, and between veins 1 and 2; cilia ashy white, with a dark shade-line near their base; underside somewhat reticulate along the same lines as on the upper side. *Abdomen* brownish cinereous. *Legs* ashy whitish, the hind tarsi transversely banded with shades of fawn-brown.

*Type* ♂ (65965); ♀ (65967) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (65966) US. Nat. Mus.]

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Four specimens.

### 36. *Tortrix orinoma*, sp. n. (Tab. VIII. fig. 27.)

*Antennae* pale bronzy fuscous. *Palpi* bronzy fuscous; terminal joint tipped with ochreous. *Head* pale bronzy fuscous. *Thorax* bronzy fuscous. *Forewings* narrow at the base, elongate, the costa moderately straight, apex slightly depressed, termen oblique; bronzy fuscous, with a short basal patch, wider on the costa than on the dorsum, a triangular patch on the middle of the costa, a small spot at the end of the cell, three small costal spots before the apex, and an angulate shade before the termen—all dark bronzy fuscous, with a few ochreous scales around their edges; cilia shining, bronzy fuscous. *Exp. al.* 16 mm. *Hindwings* and cilia pale greyish, much mottled with greyish fuscous shading. *Abdomen* pale greyish. *Legs* whitish, shaded externally, as well as on the spurs and tarsal joints, with greyish fuscous.

*Type* ♀ (66598) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

### 37. *Tortrix hilasma*, sp. n.

*Antennae* ♂ biciliate 2; cinereous, speckled with brownish. *Palpi* stretching more than the length of the head beyond it; cinereous, shaded and speckled with brown. *Head* ochreous, speckled with brown. *Thorax* brownish fuscous, a whitish spot behind. *Forewings* brownish fuscous, speckled and streaked with brownish ochreous; with silvery and steel-grey transverse lines—the first before the middle of the cell, commencing in a white costal spot, narrow and steel-grey thence to the dorsum, its upper half slightly oblique; the second, beyond the middle, broken into an outwardly curved series of small steel-grey patches, commencing with a white spot on the costa and ending before the dorsal cilia; the third, a little beyond it, commencing in two white costal spots and continued to the tornus in an outwardly curved narrow steel-grey band; a fourth, also white on the costa, becomes steel-grey, scarcely reaching across the wing before the apex, and at the apex is a spot of mixed white and ochreous scales; cilia shining grey; underside much mottled. *Exp. al.* 14 mm. *Hindwings* pale greyish fuscous; cilia greyish; underside much mottled. *Abdomen* dark grey. *Hind Legs* white, profusely speckled throughout with brownish fuscous.

*Type* ♂ (66610); ♀ (66611) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66612) US. Nat. Mus.]

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Three specimens.

This species has the colour and appearance of an *Olethreutes* of the group of *palustrana* Z.

### 39. *Tortrix gamma*, sp. n.

*Antennae* biciliate  $1\frac{1}{2}$ ; cinereous, chocolate-brown at the base. *Palpi* scarcely projecting beyond the head, smooth, but thickly scaled above; dark chocolate-brown. *Head* purplish fuscous. *Thorax* much tufted above; rich tawny chocolate. *Forewings*, with the termen strongly sinuate below the apex, not oblique—the wing maintains an almost equal width throughout, costa gently arched at the base; tawny grey, with a purplish suffusion; a rich tawny chocolate basal patch extending scarcely one-seventh of the wing-length, slightly bulged outward on the cell, margined by a narrow whitish ochreous line; a rich tawny

chocolate costal patch, commencing before the middle, and margined on its inner edge by a narrow whitish ochreous line, contains a shining silvery white Y-shaped costal blotch, followed by a ferruginous spot, whence it emits a narrow chocolate band obliquely downwards to below the middle of the termen; a smaller chocolate streak crosses the apex, the basal half of the costa is marked by a series of very short oblique ferruginous streaklets, and the dorsum by a series of short straight blackish lines; cilia tawny, with chocolate-brown reflections. *Exp. al.* 15 mm. *Hindwings* 1, the apex rounded, the costa depressed before it; greyish fuscous, with a ferruginous tint towards the apex; cilia pale greyish, ferruginous at the apex. *Abdomen* greyish fuscous. *Legs* cinereous, tarsi shaded with fuscous.

*Type* ♂ (66599, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66600) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*): TABASCO: Teapa, III. (*H. H. Smith*).  
Two specimens.

### 39. *Tortrix desmatana*, sp. n. (Tab. VIII. fig. 28.)

*Antennae* brownish. *Palpi* white, tinged with brownish externally towards the base. *Head* white. *Thorax* blackish, with some ferruginous scales. *Forewings* creamy white, with a short basal patch and a broad transverse fascia slightly beyond the middle—blackish, mixed with ferruginous and shining steel-grey; some small fuscous spots on the dorsum, upon the fold, and on the costa between the fascia and the basal patch, parallel with the outer edge of the fascia, which is angulate at the middle; a broken blackish band crosses the wing before the apex; the apex and termen bright ferruginous, with several shining steel-grey specks; cilia brownish grey. *Exp. al.* 12 mm. *Hindwings* greyish fuscous; cilia paler, a shade running through them near the base. *Abdomen* greyish fuscous. *Legs* greyish fuscous, with whitish tarsal and tibial annulations.

*Type* ♀ (66525) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 40. *Tortrix asaphes*, sp. n. (Tab. VIII. fig. 29.)

*Antennae* pale ochreous, speckled with fuscous. *Palpi* white, shaded with ochreous and speckled with fuscous externally. *Head* white. *Thorax* whitish ochreous, tufted behind. *Forewings* narrow, elongate, the costa scarcely convex, the termen very oblique; pale creamy ochreous, with a broad, transverse, greyish fuscous band occupying nearly two-thirds of the middle of the wing, its inner edge, somewhat clearly defined, approaches the base more nearly on its lower than on its upper half, its outer portion being somewhat broken on the costa by the pale ground-colour, leaving a semidetached costal spot before the apex; three small fuscous spots near the base of the costa, from the centre one of which a slight ferruginous brown shade crosses the pale basal patch to the dorsum; some similar ferruginous shading occurs before and about the apex; cilia pale whitish ochreous, a few scattered fuscous scales along the margin at their base. *Exp. al.* 13 mm. *Hindwings* pale greyish, faintly mottled with fuscous. *Abdomen* greyish. *Legs* creamy white, the tarsal joints faintly speckled.

*Type* ♀ (66552) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

### 41. *Tortrix druana*, sp. n. (Tab. VIII. fig. 30.)

*Antennae* simple in the ♂; pale fawn-ochreous. *Palpi* projecting only slightly beyond the head; pale fawn-ochreous. *Head* and *Thorax* pale fawn-ochreous. *Forewings* pale fawn-ochreous, very faintly irrorated with pale fuscous scale-points, which (in a bred specimen, and under the lens) may be seen to indicate a narrow central fascia angulated outward above the middle; a second fascia bent outward from the outer third of the costa to the tornus, and a third, outwardly angulated before the apex, reaching the middle of the termen; there is perhaps a faint basal patch, but this is only noticeable on the costa which is a good deal irrorated at the base; cilia of the same colour as the wings, a slender

darker line faintly indicated along their base, *Exp. al.* 16 mm. *Hindwings* white, faintly stained with pale ochreous, especially along the margins. *Abdomen* pale fawn-ochreous. *Legs* white.

*Type* ♂ (6002 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: DURANGO: Durango, ⊕ Cynipid-gall on *Quercus* sp., ex. 11. II. 1897. Unique.

#### 42. *Tortrix crucifer*, sp. n.

*Antennae* biciliate  $1\frac{1}{2}$ ; pale fawn-ochreous. *Palpi* slender, projecting less than the length of the head beyond it; fawn-coloured. *Head* pale ochreous. *Thorax* pale ochreous, with a fawn-brown band behind the head. *Forewings* shining, pale golden-yellow, delicately and profusely reticulated throughout with bright reddish ochreous; a dull fawn-brown shade, commencing on the costa at one-sixth from the base, forms a right-angle on the cell, and reverting to the dorsum is produced outward along it to one-third from the base, where it meets an irregular, narrow, oblique band arising on the costa at about one-fourth from the apex; this band crosses at right-angles a similar band, arising on the costa before the middle and terminating somewhat above and before the tornus, one or two spots of the same colour lying on the costa before and beyond the outer band; cilia fawn-brown with a slight lilac tinge. *Exp. al.* 21.5–24 mm. *Hindwings* pearly grey; cilia almost white. *Abdomen* very pale, shining, ochreous. *Legs* whitish ochreous.

*Type* ♂ (66618, Quiché) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (4710) US. Nat. Mus.]

*Hab.* Central America—MEXICO: DURANGO: Milpas, 5900 ft., (*A. Forrer*): VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*)—GUATEMALA: QUICHÉ: Quiché Mts., 7000–9000 ft., VIII. 1880 (*G. C. Champion*): GUATEMALA: Guatemala City (*J. Rodriguez*). Four specimens.

In the specimen from Milpas (66620 ♂) the forewings are suffused with chestnut-red, almost obliterating the markings; the head and thorax are also chestnut.

#### 43. *Tortrix regilla*, sp. n. (Tab. VIII. fig. 31.)

*Antennae* serrate and strongly biciliate 2; pale fawn-grey. *Palpi* projecting scarcely the length of the head in front; pale fawn. *Head* slightly tufted in front; pale fawn-grey. *Thorax* strongly tufted posteriorly; fawn-grey. *Forewings* yellowish fawn, the outer half transversely streaked with wide broken lines of shining leaden grey; a purplish elongate patch at the base of the costa; a rather larger triangular patch on the middle of the costa, and a smaller, elongate, purple patch on the costa before the apex—the last two slenderly outlined with leaden grey, which passes from the apex of the costal triangle surrounding a small cupreous spot at the end of the cell; below the apex is a ferruginous streak, centred with leaden grey, which occupies the upper half of the termen, the otherwise pale fawn-yellow cilia being dark tawny grey at their base so far as this streak extends. *Exp. al.* 14 mm. *Hindwings* coppery brown; cilia shining, pale greyish. *Abdomen* tawny grey. *Legs* shining, whitish.

*Type* ♂ (66616) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., X–XI. 1880 (*G. C. Champion*). Unique.

#### 44. *Tortrix apatela*, sp. n.

*Antennae* pale brownish cinereous. *Palpi* smooth, very short, scarcely projecting beyond the face; pale brownish cinereous. *Head* and *Thorax* greyish fuscous. *Forewings* with costa rather abruptly arched near the base and slightly convex beyond, apex angular, termen convex, tornus rounded; subreticulate, BIOL. CENTR.-AMER., Heter., Vol. IV., November 1914. 2 pp

obscure rosy reddish, with a patch of greyish fuscous shading on the middle of the costa, extending in a broken line obliquely outward to the end of the cell, whence it is angulated backward to the dorsum; there are other obscure small spots and streaks of the same colour nearer to the base, and a narrow band, around the apex and termen, tapering toward the tornus; the extreme edge of the costa is very narrowly pale cinereous; cilia pale cinereous. *Exp. al.* 14 mm. *Hind wings* pale brownish cinereous; cilia paler. *Abdomen* brownish grey. *Legs* whitish ochreous.

*Type* ♀ (65972) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (65974) US. Nat. Mus.]

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., 1880 (*G. C. Champion*). Four specimens.

Very similar to *Polyortha dolosa* Wlsm. (*ante*, p. 274), but differing, apart from the neurulation, in its lighter hindwings and whitish cilia.

#### 45. *Tortrix flosculana*, sp. n.

*Antennae* tawny reddish. *Palpi* short, slender, not reaching beyond the head; tawny red. *Head* and *Thorax* tawny reddish. *Forewings*, with the costa arched at the base, indented along the middle, the apex depressed and rounded, termen obliquely convex; tawny reddish, inclining to golden yellow on the upper half of the base and along the extreme edge of the costa, with a large semicircular olive-grey costal patch, narrowly margined with shining snow-white; cilia tawny reddish, with an ochreous tinge towards their tips. *Exp. al.* 13 mm. *Hindwings* ochreous red; cilia reddish ochreous. *Abdomen* reddish ochreous. *Legs* pale ochreous.

*Type* ♀ (66617, *V. de Atitlan*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (6042 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* Central America—MEXICO: VERA CRUZ: Orizaba (*W. Schaus*)—GUATEMALA: SOLOLA: Volcan de Atitlan, 2500–3500 ft., XII. 1880 (*G. C. Champion*).

Very similar in ornamentation to *speculana* Wlsm., but the ground-colour is entirely different, and it is a much smaller species.

#### 46. *Tortrix speculana*, sp. n. (Tab. VIII. fig. 32.)

*Antennae* ♂ delicately biciliate  $1\frac{1}{2}$ ; whitish, tinged with brown at the base. *Palpi* very slender; whitish. *Head* brown. *Thorax* white, with a slight brownish tinge. *Forewings* much widened outward, slightly bent near the base, the costa straight beyond, apex scarcely rounded, termen oblique; white, with a delicate brown shade overflowing the basal portion, and some stronger brown mottling at the outer fourth, running parallel to the termen and produced along the costa to the apex; a very large, irregularly triangular, costal blotch of a delicate bluish grey overspreads the whole outer half of the cell, its lower extremity resting on the fold, delicately outlined by white, from which it is separated by a very slender line of black scales; cilia silvery white; underside with a slight brownish tinge, the large triangular spot tawny brown. *Exp. al.* 22 mm. *Hindwings* silvery white, slightly hyaline; cilia shining, white; underside silvery white. *Abdomen* ochreous. *Legs* yellowish white.

*Type* ♂ (66613) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft. (*G. C. Champion*). Unique.

#### 47. *Tortrix ophiodes*, sp. n. (Tab. VIII. fig. 33.)

*Antennae* stone-ochreous. *Palpi* projecting more than the length of the head beyond it; stone-colour, speckled with reddish brown externally. *Head* stone-colour. *Thorax* stone-ochreous, with upstanding lateral tufts of spatulate scales, some of which are tipped with reddish brown. *Forewings* (without fold),

the costa straight, apex somewhat acute, termen oblique, not indented; brownish olivaceous, the space below the fold stone-ochreous; the brownish ground-colour is traversed by a reduplicated rosy vinous line, leaving the costa at about one-fourth and tending obliquely downward to the fold, where it is strongly angulated and reverts nearly to the costa before the apex, whence it is again sharply bent downward, and, after nearly reaching the termen below the middle, curves back to the dorsum before the tornus; this line, although reduplicated at its origin, becomes single after leaving the fold, and is margined throughout by narrow lines of stone-white; the effect of this line is to leave the olivaceous ground-colour in a narrow basal patch occupying the space above the fold, in a very wide triangular costal patch, with some tawny mottling and with a shining white spot near its lower extremity, in an elongate patch communicating with the dorsum, but not the costa, and traversed by three or four pale ochreous lines following the course of veins 4 to 7; the termen and cilia are tawny reddish, mottled with some paler and darker scales. *Exp. al.* 14 mm. *Hindwings* rosy grey; cilia stone-grey; underside considerably mottled with tawny reddish on their upper half. *Abdomen* olive-grey.

*Type* ♂ (66615) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., X-XI. 1880 (*G. C. Champion*). Unique.

#### 48. *Tortrix triquetra*, sp. n. (Tab. VIII. fig. 34.)

*Antennae* cinereous, touched with ferruginous towards the base; basal joint whitish ochreous. *Palpi* very long, projecting nearly three times the length of the head beyond it, the terminal joint nearly half the length of the median, clothed with appressed scales; whitish ochreous on their inner sides, suffused and speckled with reddish brown externally. *Head* whitish ochreous. *Thorax* reddish brown. *Forewings* shining, whitish, with a slight ochreous tinge; a reddish brown shade arising from the base of the costa extends obliquely outwards to the tornus, covering the base and dorsum and leaving a narrow band of the pale ground-colour between it and a large reddish brown costal triangle, which contains some tawny red patches about the margin and on the cell, and also a shining, whitish, round spot at the lower edge of the cell; beyond this triangle the white ground-colour extends to the apex, a narrow reddish brown band along the termen separating it from the mottled reddish brown and tawny grey cilia, the white space containing a slight olivaceous shade on its outer part. *Exp. al.* 17.5 mm. *Hindwings* tawny grey; cilia pale cinereous; underside somewhat mottled. *Abdomen* greyish brown. *Legs* dirty whitish.

*Type* ♀ (66614) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*). Unique.

#### 49. *Tortrix citharexylana* Z.

*Teras (Rhacodia) citharexylana* Z. Stett. Ent. Ztg. 27 138 sp.1 Pf. 1.2 ♀ (1866)<sup>1</sup>: Hor. Soc. Ent. Ross. 13 77 sp. 1 (1877)<sup>2</sup>.

*Type* ♀ (102207) Mus. Wlsm. (*Zell. Coll.*) BM.; [♂ Mus. Kaden].

*Hab.* AMERICA, C-S. Central America—COSTA RICA: Caché (*H. Rogers*); Juan Viñas, 1908 (*W. Schaus*); Tuis, 2400 ft., 1908 (*W. Schaus*). South America<sup>1-2</sup>—COLOMBIA<sup>1-2</sup>: CUNDINAMARCA: Ubaque, 27. III. 1871 (*Baron v. Nolcken*)<sup>2</sup>; (*Petersen*).

#### 50. *Tortrix dichotoma*, sp. n.

*Antennae* pale ochreous, faintly barred with reddish brown. *Palpi* pale straw-ochreous, slightly tinged with fuscous above. *Head* and *Thorax* brownish ochreous. *Forewings* pale straw-ochreous, much suffused and striated with reddish brown from the base to beyond the middle, this colour being prolonged slightly



along the dorsum and considerably along the costa, leaving the greater part of the apical half of the wing of the pale ground-colour, on which is a faint olivaceous shade towards the dorsum and some rather shining, silvery, transverse streaks—the extreme apex tawny brownish; cilia on the upper half of the margin tawny, tending to pale ochreous around the tornus. *Exp. al.* 22 mm. *Hindwings* and cilia shining whitish. *Abdomen* whitish ochreous.

*Type* ♀ (66561, *Omiteme*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66562) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Omiteme, 8000 ft., VIII. (*H. H. Smith*); GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Two specimens.

### 51. *Tortrix atima*, sp. n. (Tab. VIII. fig. 35.)

*Antennae* reddish fawn. *Palpi* short, projecting less than the length of the head beyond it; reddish fawn. *Head* reddish fawn, the *Thorax* slightly darker, with a strong raised tuft of ferruginous scales posteriorly. *Forewings* dark reddish fawn, inclining to chestnut-brown, of which there are shades and patches indicating a basal patch, not rising above the cell, a central fascia, commencing a little before the middle on the arched anterior portion of the costa, broken on the upper edge of the cell, but widening and diffused obliquely outward to the dorsum beyond the middle and extending as far as the tornus; another elongate lunate shade of the same colour occurs on the costa between this and the apex, and the termen is narrowly tinted with the same, including the cilia; on the dorsum, before the fascia, is a rather shining greyish patch, narrowly margined above and externally by a paler line, and the same shining greyish wash is reproduced less intensely on the paler portions beyond the fascia and over the whole terminal area, where it is slightly flecked with chestnut-brown scales; the termen is slightly sinuate below the apex, the tornal cilia rather shining grey. *Exp. al.* 15 mm. *Hindwings* slightly shining, bright ochreous, tinged with greyish toward the base; cilia ochreous. *Abdomen* fawn-brownish, with an ochreous tinge posteriorly. *Legs* (broken).

*Type* ♀ (66563) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*). Unique.

### 52. *Tortrix cratista*, sp. n. (Tab. IX. fig. 1.)

*Antennae* ♂ pubescent; delicately banded with tawny brown. *Palpi*, *Head*, and *Thorax* tawny brown. *Forewings*, with the costa deeply excavate before the apex, the termen also excavate below it; tawny, with an ill-defined dark tawny-brown fascia, narrow on the costa before the middle, extending obliquely to the tornus, much widened on and above the dorsum; an oblique streak of the same colour, arising from the middle of the costal excavation, is bent downward after nearly reaching the lower half of the termen; a streak of the same colour, from the apex, occupies the upper half of the termen, and is preceded by a similar, shorter, diffused costal streak—these markings are ill-defined and not easily traceable without a lens; cilia shining, tawny greyish; underside tawny, the costa ochreous, mottled with tawny. *Exp. al.* ♂ 17 mm.; ♀ 20 mm. *Hindwings*, with the central portion white, the margins broadly shaded with brownish fuscous; cilia whitish grey, with a brownish fuscous basal line; underside white, except about the apex. *Abdomen* brownish fuscous, the anal tuft paler. *Legs* dirty whitish.

*Type* ♂ (66564); ♀ (66565) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Two specimens.

In the larger ♀ the central portion of the hindwings is bright ochreous, the underside yellow, the costa orange-ochreous with tawny mottlings.

53. *Tortrix cremnobates*, sp. n. (Tab. IX. fig. 2.)

*Antennae* brownish cinereous. *Palpi* projecting more than the length of the head beyond it; cinereous. *Head* brownish cinereous. *Thorax* brownish cinereous. *Forewings* brownish cinereous, suffused with ashy grey, with a few slender transverse brownish lines; a small patch of pale ochreous projecting scales on the middle of the costa, followed by a dark brownish fuscous patch extending along the excavate portion of the margin nearly to the apex; a small transverse streak-like spot, also dark brownish fuscous, lies at the end of the cell; cilia ashy grey at their base, pale ochreous beyond. *Exp. al.* 26 mm. *Hindwings* silvery grey; cilia inclining to ochreous. *Abdomen* brownish cinereous. *Legs* whitish ochreous. *Type* ♀ (66566) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (G. C. Champion). Unique.

54. *Tortrix orycta*, sp. n.

*Antennae*, *Palpi*, *Head*, and *Thorax* mouse-grey. *Forewings* with costa deeply sinuate beyond the middle, termen sinuate below the apex; mouse-grey, with some darker (more brownish), sinuate transverse lines; a basal patch, an outwardly oblique central fascia (arising from before the costal depression), and a triangular patch (in the depression) being chiefly indicated by their brown marginal lines, one of which (in the case of the latter marking), is produced downward to the tornus, throwing indistinct branchlets inward toward the lower half of the preceding fascia; the apex and termen are also somewhat streaked with brownish; cilia mouse-grey; underside much reticulated, especially along the costa and termen. *Exp. al.* 17 mm. *Hindwings* pale cinereous, reticulate with brownish grey shade-spots; underside much reticulated, especially along the costa and termen. *Abdomen* mouse-grey. *Legs* pale cinereous. *Type* ♀ (65976) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (65978) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa (M. Trujillo). Three specimens.

55. *Tortrix ecclisis*, sp. n.

*Antennae* dull fawn. *Palpi* fawn. *Head* and *Thorax* fawn—in some specimens fawn-grey. *Forewings* fawn, or fawn-grey, with waved transverse lines of fawn-brown, enclosing spaces a shade darker than the ground-colour—these consist of an ill-defined basal patch; an oblique central fascia, much widened and angulate outward on the cell, and a lunate costal patch before the apex—this patch lies in a depression on the costa which is preceded by a strong tuft of costal cilia, giving the insect the appearance of *Oxygrapha effractana*, from which it is readily distinguished by vein 7 in the forewings ending below the apex; at the end of the cell (at the outer angle of the median fascia) is a small fuscous spot, sending out a curved fawn-brown line to the dorsum before the tornus (thus enclosing a portion of the pale space beyond the lower half of the fascia), a similar line running parallel with it from the lower edge of the lunate costal patch, from the outer end of which a short line joins it, forming the letter Y—the darker lines are accompanied by slender whitish lines throughout, and a slight grey gloss is visible on the paler portions of the wing; cilia greyish. *Exp. al.* 19 mm. *Hindwings* whitish grey; cilia paler. *Abdomen* greyish. *Legs* dirty whitish.

*Type* ♀ (66568, Cerro Zunil); ♂ (66567) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66569) US. Nat. Mus.]

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000 ft., VIII–IX. 1880 (G. C. Champion); COSTA RICA: Rio Sucio (H. Rogers); PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (G. C. Champion). Three specimens.

The description is taken from the ♀ from Cerro Zunil, the other specimens not being in sufficiently good condition to exhibit any clear markings.

**Fam. 13. PHALONIADAE.****PHALONIA Hb.**Type: *Tortrix tessarana* S-D. (Stph. 1834).

PHALONIA Hb. Verz. Schm. 393 sp. 3818-9 (1826) ; Frnld. Bull. US. Nat. Mus. 52 486-8 sp. 5431-66 (1902) ; Dyar Pr. Ent. Soc. Wash. 5 231-2 (1903) ; Krft. Smith's Check-List Lp. Bor-Am. 106-7 sp. 5850-86 (1903) : Pr. US. Nat. Mus. 28 363-4 (1905) : Can. Ent. 37 10-11, 119, 256 (1905) : 39 83-4, 159-60 (1907) : Tr. Am. Ent. Soc. 33 73-9, 80, 81-7 (1907) ; Busck Jr. NY. Ent. Soc. 15 20, 21-9 (1907) ; Frnld. Gn. Tortr. 17, 54 (1908). *AETHES* (Blbg.) Frnld. Gn. Tortr. 50, 51-2, 54 (1908).

**1. *Phalonia angulatana* Rbnsn.**

*Conchylis angulatana* Rbnsn. Tr. Am. Ent. Soc. 2 286 Pf. 8·81 (1869)<sup>1</sup> ; Frnld. Tr. Am. Ent. Soc. 10 25 sp. 137 (1882)<sup>2</sup> ; Wlsm. Tr. Ent. Soc. Lond. 1884 132 (1884)<sup>3</sup>. *Phalonia angulatana* Frnld. Bull. US. Nat. Mus. 52 487 sp. 5445 (1902)<sup>4</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-4</sup>—MASSACHUSETTS<sup>2</sup>—PENNSYLVANIA<sup>1-2, 4</sup>—WEST VIRGINIA<sup>1-2</sup>—NORTH CAROLINA<sup>3</sup>—COLORADO : LARIMER : Loveland, 5000 ft., VII. 1891 (*W. G. Smith*). Central America—MEXICO : GUERRERO : Amula, 6000 ft., VIII-IX. (*H. H. Smith*).

**2. *Phalonia argentifusa*, sp. n.**

*Antennae* biciliate 1 ; bone-whitish. *Palpi* cream-whitish, with a slight brownish shade at the base externally. *Head* and *Thorax* cream-whitish. *Forewings* cream-whitish, with light olivaceous brown shade-spots and markings, each outlined by a narrow wash of shining silvery scales ; an olivaceous brown basal patch, a little broader on the costa than on the dorsum, its outer edge somewhat sinuate, containing at the extreme base and on the costa pale silvery spots ; an outwardly oblique broad streak, from the middle of the costa, is touched with black scaling at its origin and at its apex, which is separated by silvery from a dorsal spot a little beyond the middle, also containing some black scaling—the two forming an outwardly angulate fascia interrupted below the middle ; a small spot of black scales follows this on the costa and is succeeded by a broader olivaceous costal spot, also containing black scales along its upper edge ; this and some fainter small olivaceous patches along the termen, are margined like the other markings with a narrow silvery wash ; cilia creamy olivaceous. *Exp. al.* 10-12 mm. *Hindwings* and cilia brownish grey ; the latter with a pale line along their base, their tips silvery at the apex. *Abdomen* brownish grey. *Legs* creamy whitish.

Type ♂ (66296) ; ♀ (66297) *Tierra Colorada*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66292-3) US. Nat. Mus.]

*Hab.* MEXICO : GUERRERO : *Tierra Colorada*, 2000 ft., X. (*H. H. Smith*) : VERA CRUZ : Atoyac, IV. (*H. H. Smith*). Five specimens.

Allied to 5441 *P. promptana* Rbnsn., but the markings are less oblique.

**3. *Phalonia sonora* Wlsm.**

*Conchylis sonora* Wlsm. Tr. Ent. Soc. Lond. 1884 130-1 (1884)<sup>1</sup>.

Type ♀ (36578) Mus. Wlsm. BM.

*Hab.* AMERICA, N-S. United States—TEXAS: DALLAS: 20. V. (*J. Boll*)—ARIZONA: 1883 (*H. K. Morrison*). Central America<sup>1</sup>—MEXICO<sup>1</sup>: SONORA<sup>1</sup>: 1883 (*H. K. Morrison*)<sup>1</sup>.

4. *Phalonia plicana* Wlsm.

*Conchylis plicana* Wlsm. Tr. Ent. Soc. Lond. 1884 131 (1884)<sup>1</sup>.

Type ♂ (36601); ♀ (36602) Mus. Wlsm. BM.

*Hab.* MEXICO<sup>1</sup>: SONORA<sup>1</sup>: 1883 (*H. K. Morrison*)<sup>1</sup>.

5. *Phalonia disputabilis*, sp. n. (Tab. IX. fig. 3.)

*Antennae* chestnut-brown at the base, fading to pale leaden grey beyond. *Palpi* creamy, shaded with reddish chestnut on their outer sides. *Head* and *Thorax* dull, creamy. *Forewings* shining, creamy, with a slight shade of chestnut-brown on the pale basal area—this is strongest on the costa toward the base; a broad well-defined reddish-chestnut fascia runs obliquely outward, from before the middle of the dorsum to a little beyond the middle of the costa, this is of approximately even width throughout and has a patch of shining dark leaden grey scales on its outer edge, at the end of the cell, which is produced in connection with a narrow fuscous streak to the tornus; a pale spot on the costa above, and another on the dorsum below it, beyond these the apical and terminal area is of a paler chestnut colour, mixed with some fuscous scaling, which forms a small dark costal patch before the apex, and accompanied, around the apex and termen, by a few silvery scales; cilia fuscous, touched with silvery grey at their base and at their tips. *Exp. al.* 13 mm. *Hindwings* and cilia greyish fuscous. *Abdomen* greyish fuscous. *Legs* creamy whitish.

Type ♀ (66291) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

Closely allied to 5452 *P. bunteana* Rbnsn., but differing in the apical shades and markings.

6. *Phalonia arizela*, sp. n. (Tab. IX. fig. 4.)

*Antennae* pale brownish ochreous. *Palpi* projecting the length of the head beyond it; straw-white, tinged with brown externally on the base of the median joint. *Head* straw-white. *Thorax* dark ferruginous; tegulae straw-white. *Forewings* elongate-ovate; straw-white, with a short dark ferruginous basal patch, its outer edge slightly angulated above the middle, and with a patch of the pale ground-colour at its base, extending to the dorsum but not to the costa; a narrow dark ferruginous fascia from the middle of the costa (attenuated on the cell) reaches the dorsum beyond the middle, and a few small ferruginous spots are scattered about the apical portion of the wing, but not at the extreme apex; cilia straw-white. *Exp. al.* 20 mm. *Hindwings* broader than the forewings; straw-whitish, with a slight greyish tinge. *Abdomen* and *Legs* whitish ochreous.

Type ♀ (66293) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (38 Wlsm. Det. 1893) Mus. Stgr.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*); 1872–3 (*H. Ribbe*). Two specimens.

7. *Phalonia leguminana*, Busck.

*Phalonia leguminana* Busck. = *Phtheochroa* sp. (nr. *amandana* HS.) Wlsm. Tr. Ent. Soc. Lond. 1884 132 (1884)<sup>1</sup>. *Phalonia leguminana* Busck Jr. NY. Ent. Soc. 15 28–9 (1907)<sup>2</sup>.

Type ♂ (10237) US. Nat. Mus.; sp. ?, ♀ (36606) Mus. Wlsm. BM.

*Hab.* AMERICA, N-C. United States<sup>2</sup>—DISTRICT OF COLUMBIA<sup>2</sup>: Washington, ⊕ in seed-pods *Gleditschia horrida*, IX, ex. II<sup>2</sup>; ex. 2. VII. 1883 (2860 C. V. Riley 1884)—TEXAS, SW.: 1884 (*H. K. Morrison*). Central America<sup>1</sup>—MEXICO<sup>1</sup>: SONORA<sup>1</sup>: 1883 (*H. K. Morrison*)<sup>1</sup>.

SAPHENISTA, gen. n.

(σαφήνιζω=to explain.)

= *THYRALIA* Wlsm., olim.

Type: *Conchylis lacteipalpis* Wlsm.

*Antennae* (broken). *Palpi* moderate, porrect; median joint thickened with scales; terminal joint short, blunt. *Head* roughly clothed. *Thorax* smooth. *Forewings* with the costa somewhat straight, rounded to the slightly depressed apex; termen rather oblique, not sinuate beneath apex; tornus rounded: *neuration* 12 veins, all separate; 7 to costa above apex; 2 from outer fourth of cell. *Hindwings* trapezoidal, slightly narrower than the forewings; apex and tornus rounded, termen and dorsum subsinuate: *neuration* 8 veins; 3-4 stalked; 5 almost straight, but very slightly inclining to 4 toward base; 6-7 stalked. *Legs*: hind tibiae slightly haired above.

*Thyralia* Wlsm. [Pr. Z. Soc. Lond. 1897 138-9 no. 80 sp. 205-7 (1897)] was described from *lacteipalpis* Wlsm., but the description was extended to include *bunteana* Rbnsn. which was cited as the type. Busck [Jr. NY. Ent. Soc. 15 20 (1907)] pointed out that *bunteana* Rbnsn. could not be separated from *Phalonia* Hb.; *lepidana* Clms. is also a *Phalonia*, but *lacteipalpis* Wlsm. may be at once distinguished by HW: 3-4 being stalked, not separate as in *Phalonia* Hb. The genonym "*Thyralia* Wlsm." should be cancelled.

1. *Saphenista multistrigata*, sp. n. (Tab. IX. fig. 5.)

*Antennae* biciliate 1; very pale ochreous. *Palpi* short, porrect; white, shaded with ochreous externally, nearly to the end of the median joint. *Head* and *Thorax* olivaceous ochreous; face white. *Forewings* creamy, profusely peppered with silvery scales on the pale ground-colour, and with five or six elongate streak-like patches of olivaceous brownish ochreous; one, indistinct, pointed, arising obliquely from the flexus, is followed by two of equal size, longitudinal and parallel—one on the cell, the other below it, accompanied at their upper edges by some black scales, and reaching to the middle of the wing; from the middle of the costa, above these, arises an outwardly oblique streak which terminates on the cell, but is renewed in a detached streak, or patch, in the same line, pointing to the termen above the tornus and narrowly edged outward with black scales; from this, halfway to the apex, arises a rather larger and rather less oblique streak, which terminates a little below the middle of the termen, where it is narrowly edged with black scales; beyond it the apex is speckled with the same colour, of which there is a slight shade along the dorsum and above the tornus; cilia shining, whitish ochreous. *Exp. al.* 7-8 mm. *Hindwings* and cilia brownish grey. *Abdomen* ochreous, much shaded with fuscous posteriorly. *Legs* whitish ochreous.

Type ♂ (66299, *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66301-2) US. Nat. Mus.]

*Hab.* AMERICA, C-I. Central America—MEXICO: VERA CRUZ: *Atoyac*, IV. (*H. H. Smith*): TABASCO: *Teapa*, III. (*H. H. Smith*). West Indies—JAMAICA: ST. ANN: *Moneague*, 10-22. I. 1905 (*Wlsm.*); *Runaway Bay*, 3. III. 1905 (*Wlsm.*). Fourteen specimens.

This species was met with, not uncommonly, at *Moneague* in January.



## PROPIRA, n. n., Drnt.

(πρόπειρα=a previous attempt.)

=\**COMMOPHILA* (Hb., p.; Meyr., p.) Busck—(nec Stph.).Type: *Tortrix schreibersiana* Fröl.=\**COMMOPHILA* (p.) Hb. Verz. Schm. 392 sp. 3811 (1826); (p.) Meyr. HB. Br. Lp. 544, 555-6 no. 5 sp. 2-3 (1895); Busck Jr. NY. Ent. Soc. 15 19, 20, 21, 30-1 (1907).

Meyrick adopted \**Commophila* Hb. for *schreibersiana* Fröl. (\**lediana* Hb. 151), associating with this species *amandana* HS., and *rugosana* Hb. Busck recognised that *rugosana* differed from the other species in FW: 11 being strongly approximate to 10, the internal radius arising between 11-12 (instead of between 11-10), 11 being about midway between 10-12; he therefore replaced *rugosana* Hb. in *Phtheochroa* Stph., and used \**Commophila* for the other species. Fernald [Gn. Tortr. 16, 54 (1908)] points out that Stephens restricted the usage of *Commophila* Hb. to *aeneana* Hb. [ARGYROLEPIA Stph. (B. COMMOPHILA Hb.) Stph. Ill. Br. Ent. Haust. 4 176-7 no. 207 B. sp. 3-4 (1834), 420 no. 1153 sp. 3812 (1835)] and cited *aeneana* Hb. definitely as the Type—a new genonym is therefore required for \**Commophila* (Hb.) Busck, nec Stph. Drnt.

1. *Propira albiceps*, sp. n.

*Antennae* biciliate 1; whitish ochreous. *Palpi* projecting the length of the head beyond it; white. *Head* and *Thorax* white. *Forewings* white, overspread across the middle and on the apical portion by an extensive light olive-brown shade, leaving the white ground-colour only in a basal patch (of which the outer margin is oblique, extending one-fifth along the dorsum and one-third along the costa, where it contains a slight greyish shade towards the base), and in a costal patch beyond the middle; this olive-brown shade is sprinkled throughout with patches of shining steel-grey scales, and contains a black line along the cell, interrupted by the white patch, but thence dilated toward the upper half of the termen; cilia greyish fuscous along their base, shining, grey, with some darker mottling on their outer half. *Exp. al.* 12-15 mm. *Hindwings* and cilia shining, whitish grey, slightly dark-mottled; the cilia with an inconspicuous darker shade near their base. *Abdomen* greyish ochreous. *Legs* whitish.

Type ♂ (66303) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66305) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Three specimens.

The ♂ of this species has a narrow costal fold.

1. *Propira vicina*, sp. n. (Tab. IX. fig. 6.)

*Antennae* smoky whitish. *Palpi* extending twice the length of the head beyond it, roughly clothed; white. *Head* and *Thorax* white. *Forewings* white, with a broadish median fascia, much broken and mottled in patches of different colours, which are repeated in a similar band crossing the apex, and preceded by a curved line parallel to its inner margin; on the costal portion of these bands are some ferruginous patches, alternating with shining leaden grey, which is continued throughout them, enclosing on the central portion some blackish and greyish fuscous spots—the leaden grey sheen extends also over the white ground-colour of the wing on both sides of the curved line; cilia white, shaded with greyish along their

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base; underside slightly mottled. *Exp. al.* 15 mm. *Hindwings* greyish; cilia shining, white; underside slightly mottled. *Abdomen* greyish. *Legs* whitish, tarsal joints banded with greyish fuscous.

*Type* ♀ (66306) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Panima, 1800 ft., X. 1879 (*G. C. Champion*).  
Unique.

### 3. *Propira cognata*, sp. n. (Tab. IX. fig. 7.)

*Antennae* biciliate 2; pale brown. *Palpi* hirsute, porrect, stretching a little beyond the head; cream-white. *Head* slightly roughened; cream-white. *Thorax* smooth; brown. *Forewings*, with the costa arched towards the base, ciliate throughout, apex rounded, termen oblique, scarcely convex, tornus ill-defined; cream-white, with a slight silvery sheen; a short brown basal patch, wider on the dorsum than on the costa, outwardly a little convex, partially overspread with steel-grey scales; beyond the middle of the dorsum is an ill-defined roundish brown patch, containing two or three groups of steel-grey scales, with a patch of black scales at its upper extremity; the dorsum before the middle, the costa about the middle, and before the apex obscurely streaked and mottled with brownish grey; at the apex a short brown streak at the base of the cream-white cilia. *Exp. al.* 19 mm. *Hindwings* and cilia bluish white. *Abdomen* and *Legs* cream-whitish, inclining to ochreous.

*Type* ♂ (4698) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft. 1887 (*W. Schaus*). Unique.

## CLYSIA Hb.

*Type*: *Tinea ambiguella* Hb. (Stph. 1834).

CLYSIA Hb. Verz. Schm. 409 sp. 3944-5 (1826); Meyr. HB. Br. Lp. 544, 556-7 no. 7 sp. 1 (1895); Busck Jr. NY. Ent. Soc. 15 20 (1907); Frnld. Gn. Tortr. 18, 58 (1908).

### 1. *Clysia tricesimana*, Z.

*Conchylis tricesimana* Z. Hor. Soc. Ent. Ross. 13 128-9 sp. 1 (1877)<sup>1</sup>.

*Type* ♀ (65 Wlsm. Det. 1893) Mus. Stgr.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: (*H. Ribbe*).

The following notes were made on the type in 1893:—

*Antennae* ♀ stoutish, simple. *Palpi* rather long, depressed; median joint tufted beneath; terminal joint depressed, scarcely clothed, nearly as long as median. *Forewings* 12 veins; 7-8 stalked; 2 from outer sixth of cell. *Hindwings* 8 veins; 3-4 short-stalked; 5 almost straight; 6-7 long-stalked. *Exp. al.* 19 mm.

This species tabulates to *Clysia* Hb., and having no evidence to the contrary it must be included in that genus—at least provisionally.

## HYSTEROSIA Stph.

*Type*: *Tortrix inopiana* Hw. (Stph. 1852).

XANTHOSSETIA Stph. (b. HYSTEROSIA Stph.) Stph. List Br. An. BM. 10 Lp. 85 no. 72 b. sp. 3 (1852). HYSTEROSIA Wlsm. Ann-Mag. NH. (7 s.) 6 445-6 (1900); Busck Jr. NY. Ent. Soc. 15 20, 31-4 (1907); Frnld. Gn. Tortr. 36, 37, 59 (1908).

1. *Hysterosia primula*, sp. n. (Tab. IX. fig. 8.)

*Antennae* very minutely ciliate; whitish cinereous. *Palpi* very long, porrect, hairy beneath; whitish cinereous, dusted with pale brownish fuscous on their outer sides. *Head* and *Thorax* pale primrose-yellow. *Forewings* shining, primrose-yellow, very sparsely dusted on their outer half and along the dorsum with black atoms, of which there is a small broken group, accompanying a minute shining whitish spot, at the end of the cell; cilia pale primrose-yellow; underside greyish fuscous, with pale reticulated spaces along the costa, dorsum and termen. *Exp. al.* 24 mm. *Hindwings* greyish fuscous, with numerous whitish cinereous reticulations; cilia whitish cinereous, with a dark line near their base. *Abdomen* greyish fuscous. *Legs* whitish cinereous.

*Type* ♀ (5969 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: MEXICO: Popocatepetl, 800–1000 ft., VII. 1906 (*W. Schaus*). Unique.

A beautiful and distinct species.

## Fam. 14. CARPOSINIDAE.

## CARPOSINA HS.

*Type*: *Tinea berberidella* HS. (Frnld. 1908).

CARPOSINA HS. SB. Schm. Eur. 5 10, 38 (1853), 142 no. 51 sp. 326–7 (1854), Pf. 81·614–5 (1853); 6 Pf. XII·1–2 (1853); Meyr. Ent. Mo. Mag. 19 69–70 (1882); Busck Jr. NY. Ent. Soc. 15 19, 34–6 (1907); Frnld. Gn. Tortr. 34, 59 (1908).

Meyrick removed *Carposina* HS. to *Tortricina* (*Conchylidae*) in 1882, (*cf.* Frnld. Gn. Tortr. 34).

1. *Carposina phycitana*, sp. n. (Tab. IX. fig. 9.)

*Antennae* strongly biciliate 4; shining, whitish. *Palpi* fawn-whitish. *Head* straw-whitish. *Thorax* shining, pale fawn. *Forewings* shining, pale fawn-ochreous, mottled with fawn-brown, of which the most conspicuous markings are an elongate patch on the end of the cell, and a shade along the termen, three or four fuscous spots on the outer half of the costa, and three before the terminal shade above mentioned; some shining, silvery white scales are scattered about the wing-surface, before and beyond the middle, and several patches of strongly-raised scales conform to the ground-colour on which they arise—two of these are near the base, above the fold, two below the basal half of the fold, one immediately above the middle of the fold, and one at the end of the cell; cilia fawn-whitish. *Exp. al.* 17 mm. *Hindwings* rosy grey; cilia paler. *Abdomen* shining, pale grey. *Legs* fawn-whitish, with greyish tarsal bands.

*Type* ♂ (66307) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). Unique.

This is a true *Carposina*, with typical neuration: [*Forewings* 12 veins, all separate; 2 from near angle of cell, 7 to termen. *Hindwings*, cubitus pectinate; 6 veins, (3+4) and (6+7) coincident; (3+4) and 5 short-stalked].

## Fam. 15. HEMEROPHILIDAE.

= *HEMEROPHILAE* Hb. Tent. 2 (1806).

## GLYPHIPTERYX Hb.

Type: *Tinea bergstraesserella* F. (= *\*linneella* Hb. 436, *To.* 84; *Z.* 1839).GLYPHIPTERYX Hb. (†Stph.; *Z.*). = †*GLYPHIPTERIX* Hb. Verz. Schm. 421 sp. 4101–3 (1826).GLYPHIPTERYX *Z. Isis* 32: 1839 203 no. 30 sp. 1–3 (1839); *Stgr-Rbl. Cat. Lp. Pal.* 2 130 no. 272 sp. 2320–36 (1901); *Dyar Bull. US. Nat. Mus.* 52 492–3 sp. 5510–18 (1902).1. *Glyphipteryx impigritella* Clms.= *exoptatella* Chmb.<sup>6–7</sup>.*Glyphipteryx impigritella* Clms. *Pr. Ent. Soc. Phil.* 2 9 (1863)<sup>1</sup>: *Clms-Stn. Tin. N-Am.* p. xi, 214–5 (1872)<sup>2</sup>. *Glyphipteryx exoptatella* Chmb. *Cin. Qr. Jr. Sc.* 2 234–6 (1875)<sup>3</sup>: *Bull. US. GG. Surv.* 4 148 (1878)<sup>4</sup>. *Glyphipteryx impigritella* Chmb. *Bull. US. GG. Surv.* 4 148 (1878)<sup>5</sup>: *Can. Ent.* 13 193–4 (1881)<sup>6</sup>; *Dyar Can. Ent.* 32 84 (1900)<sup>7</sup>: *Bull. US. Nat. Mus.* 52 493 sp. 5513 (1902)<sup>8</sup>; *Busck Pr. Ent. Soc. Wash.* 5 211 (1903)<sup>9</sup>.Type ♂ (178) *Ac. Nat. Sc. Phil.* [*PT.* ♂ (36098) *Mus. Wlsm. BM.*]*Hab.* AMERICA, N-C. United States<sup>1–9</sup> — PENNSYLVANIA: VII. (*Clms.*)<sup>1–2</sup>; Hazleton, 18. VII. 1895 (*W. Dietz*) — DISTRICT OF COLUMBIA<sup>9</sup>: Washington<sup>9</sup>, VI. 1903 (*A. Busck*) — KENTUCKY<sup>3</sup>: KENTON<sup>3</sup>: Covington, 22. V. (*Chamb.*)<sup>3</sup> — TEXAS<sup>8</sup>. Central America — MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*) — PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*).2. *Glyphipteryx urophora*, sp. n.*Antennae* bronzy fuscous. *Palpi* fuscous, the median joint with three oblique yellowish white streaks externally, the terminal tipped with white and with a white ring around it. *Head* and *Thorax* bronzy fuscous. *Forewings* bronzy fuscous, slightly tinged with cupreous toward the apex, beyond the middle of the costa is an outwardly oblique, iridescent, steel-grey and lilac streak, almost meeting the point of a similar dorsal streak before the tornus; beyond it is a less oblique, shorter, iridescent streak, and beyond these, before the apex, a pair of slightly converging streaks, nearer together than the two previous ones, of which the outer one is continued to the terminal incision below the apex; there is a distinct bronzy tail-streak through the cilia at the apex, the basal portion of the cilia being bronzy fuscous, their outer half bronzy grey. *Exp. al.* 8 mm. *Hindwings* bronzy brownish fuscous; cilia dark tawny grey. *Abdomen* bronzy fuscous. *Legs* bronzy fuscous, with white tarsal annulations; terminal joints of tarsi white.Type ♂ (66637, *Chiacam*) *Mus. Wlsm. (Godm-Salv. Coll.) BM.* [*PTT.* (66634, 66636) *US. Nat. Mus.*]*Hab.* Central America — MEXICO: TABASCO: Teapa, III. (*H. H. Smith*) — GUATEMALA: ALTA VERA PAZ: Chiacam, II–III. 1880 (*G. C. Champion*). Six specimens.3. *Glyphipteryx palpella*, sp. n. (Tab. IX. fig. 10.)*Antennae* greyish fuscous. *Palpi* recurved to the base of the antennae; black, the base of the median joint whitish ochreous, three whitish ochreous rings around the joint, with two length-streaks of the same on

the terminal joint. *Head* and *Thorax* greyish fuscous. *Forewings* greyish fuscous at the base, becoming yellowish brown about the middle and at the apex, with a greyish fuscous shade between; at one-fourth is an oblique, triangular, whitish patch, not attaining the costa, and on the central portion of the wing are four lilac-metallic streaks, two costal and two dorsal—the first of the former shorter than the others, the apex of the second terminating between the upper extremities of the two latter; the second dorsal streak forms the inner margin of a black tornal patch, which is sprinkled with brownish ochreous scales followed by two metallic dots; before the apex is a lilac-metallic line, from the costa to the sub-apical incision, followed by an oblique, short, white costal streak before the apex—this and a white spot at the incision are conspicuous on the underside; cilia pale greyish. *Exp. al.* 14 mm. *Hindwings* dark brownish fuscous, with a small pale spot about the middle of the dorsum; cilia paler. *Abdomen* fuscous, anal tuft inclining to ochreous. *Legs* greyish fuscous, the tibiae and tarsi banded with whitish.

*Type* ♀ (66641, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* AMERICA, C-S. **Central America**—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). **South America**—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. (*H. H. Smith*). Two specimens.

Very similar to *deltodes* Wlsm., but distinguished by the remarkable ornamentation of the palpi, and also by its larger size.

#### 4. *Glyphipteryx deltodes*, sp. n.

*Antennae* pale greyish fuscous. *Palpi* smooth, projecting slightly beyond the head; externally pale greyish fuscous, internally whitish cinereous. *Head* greyish fuscous; face cinereous. *Thorax* greyish fuscous. *Forewings* greyish fuscous, with a conspicuous triangular white dorsal patch at about one-fourth, its apex not attaining the costa; beyond it the median portion of the wing consists of yellowish ochreous blotches, on which three steel-blue metallic streaks encroach, two costal and one dorsal, the apex of the latter terminating on the cell between the lower extremities of the two former; about the tornus is a large black patch, profusely sprinkled with whitish ochreous scales in longitudinal lines, crossed transversely by four or five small metallic spots before the apex; a slender, lilac-metallic line, from the costa to the subapical incision, is followed by an ochreous band and an oblique white apical streak; cilia greyish fuscous at their base, paler outwardly; on the underside the white apical streak points to a small white spot at the incision. *Exp. al.* 9 mm. *Hindwings* greyish fuscous; cilia paler. *Abdomen* greyish fuscous. *Legs* greyish fuscous, banded on tibiae and tarsi with white; spurs white.

*Type* ♂ (66642) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66644) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Three specimens.

#### 5. *Glyphipteryx actinota*, sp. n. (Tab. IX. fig. 11.)

*Antennae* pale bronzy. *Palpi* smooth; silvery. *Head* and *Thorax* bronzy. *Forewings* bronzy, minutely striate longitudinally, to about half their length, with pale shining brassy yellow, these striae reappearing in the purplish bronzy outer half of the wing in a costal patch at two-thirds, and in a patch adjacent to the middle of the termen; the upper patch is margined before and behind by transverse brassy streaks, preceded and followed by dark purplish fuscous; there are two short brassy costal streaks before the apex, separated by dark purplish fuscous, this colour extending to a little before the middle of the dorsum; cilia dark bronzy, some dirty whitish scales at the apex. *Exp. al.* 8 mm. *Hindwings* and cilia dark fuscous. *Abdomen* dark fuscous. *Legs* dark bronzy fuscous, with white annulations.

*Type* ♀ (66640) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.



## HILAROGRAPHA Z.

Type: *Phalaena Tortrix swederiana* Stoll (Wlsm. 1897).*SETIOSTOMA* Z. (HILAROGRAPHA Z.) Z. Hor. Soc. Ent. Ross. **13** 186-90 sp. 1-2 (1877). HILAROGRAPHA Wlsm. Tr. Ent. Soc. Lond. **1897** 51-2 (1897).1. *Hilarographa swederiana* Stoll.= *trabeana* F. & R.<sup>5</sup>.*Phalaena Tortrix swederiana* Stoll Sppl. Crmr. Pap. Exot. 75, 384 Pf. **16**·5 (1790)<sup>1</sup>. *Gauris swederiana* Hb. Verz. Schm. 374 sp. 3583 (1826)<sup>2</sup>; Wkr. Cat. Lp. BM. **28** 414 sp. 8 (1863)<sup>3</sup>. *Grapholitha ? trabeana* F. & R. Reise Nov. Zool-Lp. **2** Pf. **138**·9 (1875)<sup>4</sup>. *Setiostoma* (*Hilarographa* Z.) *swederiana* Z. Hor. Soc. Ent. Ross. **13** 187-9 sp. 1 (1877)<sup>5</sup>. *Hilarographa swederiana* Wlsm. Tr. Ent. Soc. Lond. **1897** 51-2 (1897)<sup>6</sup>.*Hab.* AMERICA, C-S. Central America<sup>5</sup>—PANAMA<sup>5</sup>: CHIRIQUI<sup>5</sup> (*H. Ribbe*)<sup>5</sup>; Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). South America<sup>1-6</sup>—COLOMBIA: CUNDINAMARCA: Cananche, IX. 1903 (*de Mathan*)—BRITISH GUIANA (*J. Rodway*, 1907)—DUTCH GUIANA<sup>1,5</sup>: Suriname (*Renaud*)<sup>1,5</sup>; Paramaribo (*W. Schaus*)—FRENCH GUIANA: Cayenne (*Ragonot*, 1894)—BRAZIL<sup>3-5</sup>: AMAZONS<sup>3-5</sup> (*H. W. Bates*)<sup>4</sup>; Ega (*H. W. Bates*)<sup>3,5</sup>; Lago Carrado, Rio Jurua, 30. X. 1874 (*J. H. W. Trail*): PARA<sup>3,5</sup>: Pará (*G. Graham*; *H. W. Bates*)<sup>3,5</sup>.2. *Hilarographa ribbei* Z.*Setiostoma* (*Hilarographa* Z.) *ribbei* Z. Hor. Soc. Ent. Ross. **13** 189-90 (1877)<sup>1</sup>.*Antennae* brown. *Palpi* slightly rough beneath, closely recurved to the vertex; pale ochreous. *Head* brown above; face ochreous. *Thorax* brown, with ochreous streaks about the tegulae. *Forewings*, with the costa slightly arched beyond the middle, termen scarcely incised below, apex convex beneath; purplish brown, with pale ochreous and steel-blue oblique costal streaks, blending with golden yellow in the terminal portion of the wing, on which the purplish ground-colour encroaches in wavy bands and blotches; a large, subovate, pale golden ochreous patch crosses the fold before the middle, reaching the middle of the cell at its upper extremity, and nearly reaching the basal third of the dorsum at its lower extremity; before the tornus is a small, slightly oblique, erect patch of the same colour; the costal streaks consist of three (before, at, and beyond the middle respectively), of which the two outer ones become steel-blue after leaving the margin—and a series of four before the apex; the first, widely separated at its origin from the outer three, forming a steel-blue line extending nearly to the termen; the outer three are whitish ochreous, cuneiform, in close juxtaposition, their apices somewhat converging; cilia (worn); underside cupreous. *Exp. al.* 20-21 mm. *Hindwings* rich cupreous; cilia inclining to ochreous; underside cupreous. *Abdomen* brownish cupreous, pale ochreous beneath. *Legs* shining, pale ochreous, the tarsi smeared with cupreous.*Type* ♀ (*Chiriqui*) Mus. Stgr. [CT. ♀ (66666, *San Juan*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.]*Hab.* AMERICA<sup>1</sup>, C-S. Central America<sup>1</sup>—MEXICO: VERA CRUZ: Santa Rosa, VIII. 1906 (*W. Schaus*)—GUATEMALA: ALTA VERA PAZ: San Juan, 1800 ft., 24-30. XI. 1879 (*G. C. Champion*)—COSTA RICA: Peralta, 2000 ft., X. 1906 (*W. Schaus*)—PANAMA<sup>1</sup>: CHIRIQUI (*H. Ribbe*)<sup>1</sup>. South America—ECUADOR: Paramba, III. 1897 (*W. F. H. Rosenberg*); Chimborazo, IX. 1897 (*W. F. H. Rosenberg*).

3. *Hilarographa quinquestrigana* Wkr.

n. syn. = *firmana* F. & R.

*Carpocapsa quinquestrigana* Wkr. Cat. Lp. BM. 35 1796-7 (1866)<sup>1</sup>. *Carpocapsa firmana* F. & R. Reise Nov. Zool-Lp. 2 Pf. 138 · 10 (1875)<sup>2</sup>.

Types ♂ ♀: *quinquestrigana* Wkr., ♂ (1865:23, *San Paulo*) BM.; *firmana* F. & R. ♀ (1913:86) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Santa Rosa, VIII. 1906 (*W. Schaus*)—GUATEMALA: ALTA VERA PAZ: San Juan, 1800 ft., 24-30. XI. 1879 (*G. C. Champion*); Cubilguitz, 1050 ft., III. 1880 (*G. C. Champion*). South America<sup>1-2</sup>—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*)—BRAZIL<sup>1-2</sup>: AMAZONS<sup>1-2</sup>: San Paulo de Olivença, 1857 (*H. W. Bates*)<sup>1</sup>.

## SETIOSTOMA Z.

Type: *Setiostoma xanthobasis* Z.

SETIOSTOMA Z. Verh. ZB. Ges. Wien 25:1875 Abh. 324-6 sp. 1-2 Pf. 9·42 (1875): Hor. Soc. Ent. Ross. 13 186-90 (1877); Dyar Can. Ent. 32 37, 41 (1900); Frnld. Can. Ent. 32 238, 244-5 (1900); Dyar Bull. US. Nat. Mus. 52 494 sp. 5535-6 (1902).

1. *Setiostoma eusema*, sp. n. (Tab. IX. fig. 12.)

*Antennae* white above, reddish fuscous beneath. *Palpi* white above, bright orange-yellow beneath. *Head* and *Thorax* dark purplish fuscous. *Forewings* bright yellow at the base, a rosy purplish metallic spot on the costa, and a limbal shade in the yellow basal patch, which is bounded at about one-fourth by a dark reddish cupreous line, descending straight from costa to dorsum, its outer side shining rosy steel-grey, succeeded by a band of rich cupreous, on the outer edge of which, about the middle, is a conspicuous tuft of raised dark brownish fuscous scales; the median portion of the wing, except for a cupreous patch, on the costa rather beyond the middle, is shining rosy steel, blending into a cupreous patch, produced to the apex and containing some black and bright blue-metallic scales in its upper portion, and a strong patch of brilliant purple before the termen; cilia shining, purplish grey. *Exp. al.* 12 mm. *Hindwings* shining, dark brownish cupreous; cilia blue-grey, with a dark line along their base. *Abdomen* (missing). *Legs* silvery white, with cupreous bands on their outer sides, and one or two cupreous spots on the hind tarsi.

Type ♂ (66665) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: SACATEPEQUEZ: Capetillo, IV-V. 1879 (*G. C. Champion*).  
Unique.

This species differs from *xanthobasis* Z. and *fernaldella* Riley in having the tegulae uniformly dark-coloured, like the thorax.

## MICTOPSICHIA Hb.

Type: *Phalaena Tortrix hubneriana* Stoll.

MICTOPSICHIA Hb. Verz. Schm. 374 sp. 3580-1 (1826); F. & R. Reise Nov. Zool-Lp. 2 Pf. 138·23 (1875); Wlsm. Tr. Ent. Soc. Lond. 1897 54-6 Pf. 3·20 (1897).

### 1. *Mictopsichia fuesslyana* Stoll. (Tab. IX. fig. 14.)

=†*fuesliniana* Stoll; =†*fueslynialis* Stoll.

*Phalaena Tortrix fuessliniana* Stoll, Crmr. Pap. Exot. 4 163 Pf. 372·E (1781)<sup>1</sup>. *Phalaena Pyralis fuesslynialis* Stoll, Crmr. Pap. Exot. 4 249 (1782)<sup>2</sup>. *Phalaena Tortrix fuessliniana* Stoll, Crmr. Pap. Exot. 4 (Essai Syst. Lp.) 27 sp. 9 (1782)<sup>3</sup>; Goeze Ent. Btr. (L. Syst. Nat. XII.) 3 (4) 51 sp. 165 (1783)<sup>4</sup>. *Pyralis fuesslyniana* Vrlrn. Cat. Syst. Crmr. 138, 263 (1837)<sup>5</sup>. *Gauris fuessliniana* Wkr. Cat. Lp. BM. 28 413-4 sp. 2 (1863)<sup>6</sup>. *Simaethis fuessliniana* Z. Hor. Soc. Ent. Ross. 13 185-6 sp. 8 (1877)<sup>7</sup>.

Type o . . . . (Coll. W. van der Meulen)<sup>1</sup>.

*Hab.* AMERICA, C-S. Central America<sup>7</sup>—(Sommer Coll.)<sup>7</sup>—GUATEMALA: ALTA VERA PAZ: Teleman, 13-18. V. 1880 (*G. C. Champion*)—HONDURAS: BAY I<sup>DS</sup>: Ruatan Id. (*Gaumer*)—PANAMA<sup>7</sup>: CHIRIQUI (*H. Ribbe*)<sup>7</sup>. South America<sup>1-7</sup>—BRITISH GUIANA: Bartica, R. Essequibo, 6.V-8.VI. 1901 (*H. S. Parish*)—DUTCH GUIANA<sup>1-4</sup>: Surinam<sup>1-4, 7</sup>—FRENCH GUIANA: Cayenne (*W. Schaus*)—BRAZIL<sup>6-7</sup>: AMAZONS<sup>6-7</sup>: Ega (*H. W. Bates*)<sup>6-7</sup>: PARA<sup>6-7</sup>: Pará (*J. P. G. Smith*; *H. W. Bates*)<sup>6-7</sup>; Santarem, X. 1884 (*J. H. Leech*): CEARA: Ceara, VIII. 1884 (*J. H. Leech*)—PERU: (*W. Schaus*).

[Walker's specimens *f* (Pará, *H. W. Bates*) and *i* (Amazons, *A. R. Wallace*) are *durranti* Wlsm.]

### 2. *Mictopsichia durranti*, sp. n. (Tab. IX. fig. 13.)

=\**Gauris fuessliniana* (*partim*) Wkr. Cat. Lp. BM. 28 413-4 sp. 2 (1863)<sup>1</sup>—[spns. *f* and *i*].

*Antennae* pale yellow, basal joint black. *Palpi* sooty black. *Head* orange above, face sooty black. *Thorax* reddish orange (sometimes yellowish orange), with a metallic steel-grey patch in the middle, and a line of the same colour across the tegulae. *Forewings* much widened outwardly, apex produced, almost falcate, termen straight, tornus rounded; deep reddish orange (varying to paler yellowish orange); the basal third of the wing with four steel-grey metallic streaks—the first nearly parallel with the costa from the base to one-third, connected by two bars to the costa itself; the second from the middle of the base, shorter than the first, but parallel with it; the third arising from the dorsum, passing the second obliquely and nearly reaching the outer end of the first; the fourth short, arising from the dorsum and terminating in a black patch, which crosses the fold and is narrowly connected with a smaller patch on the dorsum; there is no black dorsal patch between the third and fourth of the basal streaks [in this respect it differs from *fuesslyana* Stoll, in which the two patches are separated, the lower one preceding the upper]; this portion of the wing is bounded by a steel-grey metallic band, somewhat fluctuate, the space beyond it, as far as the tornus and to beyond the end of the cell, is distinctly reticulated with dark purple, a black patch lying on the costa and outwardly bounded by another steel-grey streak with greenish reflections; a shorter straight costal streak follows this, with a black spot between them, and in the apical portion of the wing are two longitudinal and two transverse bright metallic green streaks, not connected with each other, exceptionally, however, the apical streak reaches the inner transverse streak [in this again it differs from *fuesslyana* Stoll, in which the first of the longitudinal streaks joining the first of the transverse ones forms with it a connected curved line, pointing out to the costa before the apex]; costal cilia clean white, with a black line along their base, the remaining cilia at the apex and termen purplish black; underside with the apical and terminal portion strongly reticulate with blackish, and with four or five metallic spots or streaks before the apex—as on the upper side, these are disconnected from each other, whereas in *fuesslyana* Stoll the two middle streaks form a single curve. *Exp. al.* 19-20 mm. *Hindwings* rich orange (varying to pale yellowish orange) with two or three transverse black striae in the apical third; cilia purplish black, with a

black line along their base; underside with two or three transverse black streaks towards the apex, and two or three small costal streaks preceding them. *Abdomen* orange. *Legs* pale orange ochreous, tarsi banded with black.

*Type* ♂ (62319, *Para*); ♀ (62320) *Santarem*, Mus. Wlsm. BM. [*PT.* (5405) US. Nat. Mus.]

*Hab.* AMERICA, C-S. **Central America**—PANAMA: CHIRIQUI: Tolé, I. 1883 (*G. C. Champion*). **South America**—FRENCH GUIANA: Nouveau Chantier, V. (*E. Le Moul*)—BRAZIL<sup>1</sup>: PARA<sup>1</sup>: Pará (*H. W. Bates*)<sup>1</sup>, 23. X. 1892 (*A. Schulz*), X. 1884 (*J. H. Leech*); Apehu, 31. X. 1892 (*A. Schulz*); Ourem, 30. I. 1894 (*A. Schulz*): AMAZONS (*A. R. Wallace*)<sup>1</sup>. Twelve specimens.

This is one of the most remarkable instances I have ever met with in which the general appearance and markings of two distinct species are so absolutely deceiving. The slight differences noticed in the above description are perfectly consistent throughout a series of twelve specimens from various localities in which the closely allied *fuesslyana* Stoll. (twenty-one specimens) also occurs. In their flight they must be inextricably mixed, but I have seen no intermediate varieties and the genital appendages of the ♂ are not alike. The black palpi and the disconnected subapical metallic streaks at right angles to each other are the two points in which *durranti* consistently differs from *fuesslyana* Stoll, which has yellow palpi and a curved subapical line.

[Two specimens recorded by Walker as *fuesliniana* belong to *durranti*—(*f*, *Para*, *H. W. Bates*) and (*i*, *Amazons*, *A. R. Wallace*).

*Mictopsichia superba* F. & R. [*Reise Nov. Zool-Lp.* 2 Pf. 138·23 (1875) *Amazons*, *Type* ♀ (1913:86) *Roths. Coll. (Fldr. Coll.)* BM.] is closely allied to *durranti*, but has yellow palpi like *fuesslyana* Stoll; *Mictopsichia renaudalis* Stoll [*Phalaena Pyralis renaudalis* Stoll Sppl. Crmr. Pap. Exot. 42 Pf. 8·7 (1787) *Surinam*] is a fourth species of this group, if the figure is reliable. Drnt.]

### 3. *Mictopsichia godmani*, sp. n.

*Antennae* pale ochreous, faintly barred with blackish above. *Palpi* pale ochreous. *Head* pale ochreous. *Thorax* dull leaden grey, streaked at the sides with coppery red; the tegulae coppery red, margined with shining steel-blue; underside white. *Forewings* deep coppery red, mottled and streaked with shining steel-blue, alternating with orange and a little black; the costa is narrowly pale orange, blending to deeper orange before the middle, and marked with about eight blackish costal spots, the one on the middle being longer than the others; from the base, to about one-fourth, a pale orange-yellow streak runs along the upper edge of the cell, margined on either side by steel-blue, of which there is also a short transverse streak beyond its apex and another below its apex, the latter obliquely reaching the flexus; along the dorsum the coppery red ground-colour is speckled with black and pale steel-blue, some bright orange red spots appearing among the deep black which precedes a steel-blue spot before the tornus; radiating from the direction of the tornus, but commencing only on a level with the lower edge of the cell, three bright steel-blue bands radiate toward the costa, but do not quite reach it, their course slightly curved—the inner one of these touches the median black costal spot, the rich coppery red ground-colour preceding it and containing a shorter steel-blue streak; between the first and the second band the ground-colour becomes pale orange, between the second and the third it reassumes the coppery red, while beyond the third it is again pale orange, the apex being coppery red; two small steel-blue spots

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on the termen above the tornus; cilia coppery red at the base, pale steel-blue on their outer half. *Exp. al.* 15-16 mm. *Hindwings* orange, paler toward the base, becoming more reddish outwardly, flecked with fuscous about the apex, and with three or four fuscous spots near the flexus; a large ocelloid spot lies on the middle of the termen, its outer half bright steel-blue, its inner half coppery red broadly margined with black; cilia pale steel-blue, with an orange line along their base. *Abdomen* dull ochreous. *Legs* pale ochreous, the ends of the tibiae and the hind tarsi barred with black.

*Type* ♂ (65373, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (4722) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*): TABASCO: Teapa, III. (*H. H. Smith*). Three specimens.

Most nearly allied to *Mictopsichia ornatissima* Dgn. [*Gauris ornatissima* Dgn. Ann. Soc. Ent. Belg. 53 94 (1909) Pebas, Peru] and to *Mictopsichia argus* Wlsm. [Tr. Ent. Soc. Lond. 1897 54-6 Pf. 3·20 (1897) Kangwé, French Congo]—another very similar species occurs in South-East Borneo.

#### 4. *Mictopsichia hübnneriana* Stoll.

=†*hubneriana* Stoll; †*hubnerana* Hb.

*Phalaena Tortrix hübnneriana* Stoll Sppl. Crmr. Pap. Exot. 41, 383 Pf. 8·5 (1787)<sup>1</sup>. *Mictopsichia hübnneriana* Hb. Verz. Schm. 374 sp. 3581 (1826)<sup>2</sup>. *Pyrallis hübnneriana* Vrlrn. Cat. Syst. Crmr. 155, 263 (1837)<sup>3</sup>. *Gauris hübnneriana* Wkr. Cat. Lp. BM. 28 414 sp. 6 (1863)<sup>4</sup>. *Mictopsichia hübnneriana* F. & R. Reise Nov. Zool-Lp. 2 Pf. 138·22 (1875)<sup>5</sup>. *Simaethis hübnneriana* Z. Hor. Soc. Ent. Ross. 13 183-4 sp. 7 (1877)<sup>6</sup>.

*Type* ♂ . . . . . (Coll. L. F. Holthuisen)<sup>1</sup>.

*Hab.* AMERICA, C-S. Central America<sup>6</sup>—PANAMA<sup>6</sup>: CHIRIQUI<sup>6</sup> (*H. Ribbe*)<sup>6</sup>; La Caldera, 1500 ft., VIII. 1881 (*G. C. Champion*). South America<sup>1-6</sup>—COLOMBIA: MAGDALENA: Minca, 2000 ft., VI. 1899 (*H. H. Smith*)—BRITISH GUIANA: Bartica, R. Essequibo, 6. V, 3. VII. 1901 (*H. S. Parish*)—DUTCH GUIANA<sup>1-3, 6</sup>: Suriname (*Renaud*)<sup>1-3, 6</sup>—FRENCH GUIANA: St. Jean, Rio Maroni (*W. Schaus*)—BRAZIL<sup>4-6</sup>: CEARA: Ceara, VIII. 1884 (*J. H. Leech*): PARA<sup>4</sup>: Pará (*J. P. G. Smith*; *H. W. Bates*)<sup>4</sup>, 6. VI. 1894 (*A. Schulz*); Santarem, X. 1884 (*J. H. Leech*); Apehu, 31. X. 1892 (*A. Schulz*): AMAZONS<sup>4-6</sup>: Manaus (*B. Piffard*); Ega (*H. W. Bates*)<sup>4</sup>—PERU: AMAZONAS: Rio Marañon (*Dohrn*).

Walker<sup>4</sup> recorded *hübnneriana* Stoll as from "Honduras. From Mr. Miller's collection," but the specimen is labelled 1258 [1258=South America (*Warwick*)]—the occurrence of this species in British Honduras requires confirmation.

#### 5. *Mictopsichia gemmisparsana* Wkr.

*Gauris gemmisparsana* Wkr. Cat. Lp. BM. 28 415 sp. 9 (1863)<sup>1</sup>.

*Type* ♀ (1857: 20) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: ALTA VERA PAZ: Cubilguitz, 1050 ft., III. 1880 (*G. C. Champion*); Panima, 1800 ft., X. 1879 (*G. C.*



*Champion*)—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*).  
**South America**<sup>1</sup>—COLOMBIA: MAGDALENA: Santa Marta (*P. Bouchard*); Minca, 2000 ft.,  
 VI. 1899 (*H. H. Smith*); CUNDINAMARCA: Bogota (*Birchall*)—BRITISH GUIANA  
 (*J. Rodway*); Bartica, R. Essequibo, 10. VI–3. VII. 1901 (*H. S. Parish*)—FRENCH  
 GUIANA: Cayenne (*W. Schaus*); St. Jean, Rio Maroni, VII. 1904 (*E. Le Mout*)—BRAZIL<sup>1</sup>:  
 PARA: Santarem, X. 1884 (*J. H. Leech*); AMAZONS<sup>1</sup>: Manaus, IX. 1884 (*J. H. Leech*);  
 Rio Faro (*Stgr.*); Ega (*H. W. Bates*)<sup>1</sup>; CEARA: Ceara, VIII. 1884 (*J. H. Leech*); BAHIA:  
 Itaparica Id., 28. XII. 1905 (*G. Meade-Waldo*)—BOLIVIA: Songo (*G. Garlepp*).

### BRENTHIA Clms.

= *MICROAETHIA* Chmb. LN.

Type: *Brenthia pavonacella* Clms. (Clms. 1860).

**BRENTHIA** Clms. Pr. Ac. Nat-Sc. Phil. **12** 172 (1860): Clms-Stn. Tin. N-Am. pp. vii, 38, 41, 133–5  
 (1872); (= *MICROAETHIA* Chmb. LN.) Chmb. Can. Ent. **10** 76–7 (1878); Frnld. Can. Ent. **32**  
 238, 243–4 (1900); Dyar Bull. US. Nat. Mus. **52** 494 sp. 5532 (1902); Meyr. Pr. Linn.  
 Soc. NSW. **32**: **1907** 51, 108–9 no. 34 sp. 200–2 (1907).

#### 1. *Brenthia pavonacella* Clms.

†*pavonicella* Chmb.; = *amphicarpeoeana* Chmb. LN.<sup>6</sup>

*Brenthia pavonacella* Clms. Pr. Ac. Nat-Sc. Phil. **12** 172 (1860)<sup>1</sup>: Clms-Stn. Tin. N-Am. p. vii,  
 37, 41, 134–5 (1872)<sup>2</sup>; Z. Verh. ZB. Ges. Wien **25** Abh. 323–4 (1875)<sup>3</sup>; Hor. Soc. Ent.  
 Ross. **13** 174 sp. 2 (1877)<sup>4</sup>. *Brenthia pavonicella* Chmb. Bull. US. GG. Surv. **4** 132 (1878)<sup>5</sup>.  
*Brenthia pavonacella* (= *Microaethia amphicarpeoeana* Chmb. LN.) Chmb. Can. Ent. **10** 76–7  
 (1878)<sup>6</sup>; Mschr. Abh. Senck. Nat. Ges. **16** 335 sp. 593, 354 sp. 906 (1890)<sup>7</sup>; Wlsm. Pr. Z.  
 Soc. Lond. **1891** 529, 547 sp. 108 (1892)<sup>8</sup>; **1897** 120 sp. 158 (1897)<sup>9</sup>. *Brenthia pavonicella*  
 Frnld. Can. Ent. **32** 243–4 (1900)<sup>10</sup>. *Brenthia pavonacella* Dyar Bull. US. Nat. Mus. **52** 494  
 sp. 5532 (1902)<sup>11</sup>; Busck Pr. Ent. Soc. Wash. **5** 203 (1903)<sup>12</sup>.

Type ♂ (93) Ac. Nat-Sc. Phil.<sup>9</sup> [*PTT.* (36118–9) Mus. Wlsm. BM.]

*Hab.* AMERICA, N–S–I. **United States**<sup>1–3, 5–12</sup>—ATLANTIC STATES<sup>11</sup>—PENNSYLVANIA<sup>9–10</sup>: VII–VIII<sup>1–3, 9–10</sup>—ILLINOIS<sup>10</sup>—KENTUCKY<sup>6, 9</sup>: ⊕ *Amphicarpea monoica*,  
 VI–VII, ex. VII<sup>6</sup>, ⊕ IX.<sup>6, 9–10</sup>—NORTH CAROLINA: 1883 (*H. K. Morrison*)—KANSAS<sup>10</sup>—  
 TEXAS (*J. Boll*)<sup>3, 7, 9–10</sup>. **Central America**<sup>4, 7–10</sup>: MEXICO: GUERRERO: Tierra Colorada,  
 2000 ft., IX. (*H. H. Smith*); TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: ALTA  
 VERA PAZ: Teleman, 13–18. V. 1880 (*G. C. Champion*); Panima, 1800 ft., X. 1879  
 (*G. C. Champion*); San Juan, 1800 ft., 24–30. XI. 1879 (*G. C. Champion*)—  
 PANAMA<sup>4, 7–10</sup>: CHIRIQUI<sup>4, 7–9</sup> (*H. Ribbe*)<sup>4</sup>; Bugaba, 800–1500 ft., 1881–3 (*G. C.*  
*Champion*). **South America**<sup>3, 7–10</sup>—COLOMBIA (*Zell. Coll.*)—BRAZIL (*Zell. Coll.*)<sup>3, 7–10</sup>.  
**West Indies**<sup>4, 7–10</sup>—[*ANTILLES* ? (*Sommer Coll.*)<sup>4, 9</sup>]—PORTORICO<sup>7–9</sup>.

## 2. *Brenthia ocellata*, sp. n.

*Antennae* brownish fuscous, with faint paler annulations toward the base. *Palpi* whitish, the median joint with a blackish spot outside at the base, and a blackish bar before its apex; terminal joint with a black line along its outer side throughout. *Head* greyish brown. *Thorax* dark brownish fuscous, the tegulae with two slender white lateral lines. *Forewings* dark brownish fuscous, sprinkled with dirty whitish, especially in a transverse band pointing inward from the costa at one-fourth, having some blue and reddish iridescent metallic scales at its costal extremity; and in a broader band across the middle, composed of broken whitish reticulation, and throwing out a shining, pointed, projection of blue and lilac scales from its upper extremity beneath the costa; the outer third of the wing, which is somewhat darker than the remainder, contains a conspicuous, shining, white spot and a row of partially coalescing iridescent blue and lilac spots along the termen and around the apex; cilia brownish fuscous at their base, brownish grey on their outer half, a few at the apex being tipped with white. *Exp. al.* 12–13 mm. *Hindwings* brownish fuscous, a band of bright rosy blue around the apex, preceded by an oblique streak of the same pointing inward from the costa, with a small metallic median spot below its inner extremity; a cloudy whitish patch descends obliquely outward from the costa near the base, and a straight silvery white bar, from the dorsum near the flexus, extends to vein 6 between the cell and the termen—this bar whitens the dorsal cilia, another white streak running through them obliquely from the lower end of the apical metallic band; between these white patches the cilia are dark brownish fuscous. *Abdomen* dark brownish fuscous, with a slender whitish transverse bar below the middle. *Legs* alternately banded with white and dark brownish fuscous.

*Type* ♂ (66676, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (6133–4 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab. Central America*—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*); Cordova, V. 1908 (*F. Knab*)—GUATEMALA; ALTA VERA PAZ: Teleman, 13–18. V. 1880 (*G. C. Champion*): BAJA VERA PAZ: San Gerónimo, 1879–80 (*G. C. Champion*)—COSTA RICA: Caché (*H. Rogers*). Seven specimens.

## 3. *Brenthia bicaudella*, sp. n.

*Antennae* dark brownish fuscous, spotted with white. *Palpi* whitish, tipped with fuscous. *Head* brownish grey. *Thorax* brownish fuscous, with two slender, longitudinal, steel-green metallic lines meeting in a spot at the back; underside silvery white. *Forewings* dark brownish fuscous, with a large, oblong, snow-white spot across the end of the cell, and another on the dorsum a little before the middle; at the base are two shining steel-blue metallic spots, just below the costa; a short steel-green streak from near the base beneath them, and another between this and the dorsum; beyond the outer of the subcostal spots is a larger metallic blue spot, just below the middle of the costa, an outwardly curved band of the same colour lying beyond the white discal spot, but not quite touching the costa or dorsum; before the apex is a short blue metallic streak; cilia dark brown on their basal half, shining brownish grey on their outer half, with a white spot at their apex. *Exp. al.* 9–11 mm. *Hindwings* slightly paler brownish fuscous than the forewings, with an elongate snow-white discal spot, followed by a broad lilac-blue metallic band, running straight from near the apex to a little below the flexus; there is a white spot on the costa before the apex, and another in the brown cilia at the apex, while in the terminal cilia are two inwardly oblique white dashes, giving to the intervening brown spaces in the cilia a singular caudate appearance—the cilia on the flexus are also white. *Abdomen* dark brownish fuscous; underside silvery white. *Legs* banded alternately with dark brownish fuscous and silvery white.

*Type* ♂ (66681, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66682) US. Nat. Mus.]

*Hab. Central America*—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—PANAMA: PANAMA: Panama, 27. V. 1882 (*J. J. Walker*). Four specimens.

PORPE Hb.

= \**CHOREUTIS* (Hb.) Stgr-Rbl.; Dyar, etc.

Type: *Tinea bjerkandrella* Thnbg. (=†*fibrana* Hb.; Hb. 1826).

PORPE Hb. Verz. Schm. 373 sp. 3579 (1826); Wlsm. Pr. Z. Soc. Lond. 1907 987 no. 53 sp. 108 (1908).

1. *Porpe clemensella*, sp. n.

*Antennae* biciliate  $2\frac{1}{2}$ ; distinctly annulate with white and brownish fuscous. *Palpi* projecting nearly the length of the head beyond it, terminal joint short, porrect, pointed; the median joint clothed with a long brush beneath, divided into five or six separate hair-pencils, almost as long as the palpi themselves; the whole brownish fuscous, speckled with whitish. *Head* brown, delicately speckled with white. *Thorax* brown, with a delicate white line along the edge of the tegulae. *Forewings* somewhat triangular, costa slightly arched, termen oblique, dorsum slightly convex, but narrowing to the base; dark umber-brown to beyond the middle, varied with orange-brown and steel-grey; a bright metallic steel-grey dash, from the base below the costa, rests upon the upper edge of an orange-brown basal streak below it, which is interrupted by a transverse band of diffuse steel-grey speckles, terminating in a white oblique costal spot; the dark portion of the wing is margined at two-thirds by a steel-grey line, rising erect, from a little beyond a small steel-grey dorsal spot, but recurved from the end of the cell to the middle of the costa, where it terminates in a white spot beyond it; the terminal portion of the wing is orange-brown, interrupted by an oblique white costal streak, and by a steel-grey band, internally dark-margined, running parallel with the termen, but not quite reaching the costa; cilia pale cinereous, with a brownish fuscous line along their base, reduplicated at half their length. *Exp. al.* 11 mm. *Hindwings* greyish brown, with a similar reduplicated line in the pale cinereous cilia. *Abdomen* brown, with slender steel-grey transverse bands. *Legs* white, with numerous brownish annulations, spurs white.

Type ♂ (66685) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66686) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Two specimens.

2. *Porpe loxotenes*, sp. n. (Tab. IX. fig. 15.)

*Antennae* ♂ biciliate 3; annulate with brown and whitish cinereous. *Palpi* cinereous, shaded with brownish fuscous, a very long divided tuft beneath the median joint; terminal joint slender, pointed, porrect. *Head* cinereous. *Thorax* brownish fuscous, margined posteriorly with pale cinereous; the tegulae streaked with the same. *Forewings* brownish fuscous, with a pale cinereous band at one-fourth, slanting obliquely backwards from costa to dorsum; a bronzy metallic streak along the costa from the base is accompanied by an olive-brown streak beneath it, reaching to the pale transverse band; beyond the band is a bronzy iridescent metallic streak, broken above the fold, and reverting to the dorsum beneath it, at its upper end a small pale costal spot; two larger whitish spots on the costa beyond the middle, with a few shining metallic scales at their lower and outer extremities—beneath and about these the darker wing-surface is profusely sprinkled with whitish cinereous atoms; a large ocelloid patch, lying above the outer extremity of the fold, consists of two coppery metallic patches surrounded by black, separated by a slender line, and margined above by a pale cinereous longitudinal streak; a narrow olive-brown band, around the apex, is preceded by a coppery metallic line running nearly parallel with the outline of the apex and termen; cilia brownish cupreous, with two pale interruptions on the middle of the termen, and one smaller one at the tornus. *Exp. al.* 14 mm. *Hindwings* brownish fuscous, paler toward the costa, and with a pale spot, below the outer end of the cell, placed transversely and somewhat obliquely; cilia pale cinereous, with a dark line along their base, reduplicated at the apex and on the abdominal half of the flexus. *Abdomen* greyish fuscous. *Legs* pale cinereous, the tarsi and hinder extremities of the tibiae banded with greyish fuscous, the pale spurs also streaked with the same.

Type ♂ (66687) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: SOLOLA: Panajachel, 5000 ft., XII. 1880 (*G. C. Champion*).  
Unique.

### 3. *Porpe pelinobasis*, sp. n. (Tab. IX. fig. 16.)

*Antennae* faintly annulate with brown and whitish. *Palpi* mixed brown and brownish creamy. *Head* and *Thorax* brownish creamy, the latter smeared with brown. *Forewings* with a brownish creamy basal patch to nearly one-fourth, wider on the dorsum than on the costa; this is followed by a dark brown transverse band, wider on the costa than on the dorsum, containing a few spots of dark fuscous scales; an iridescent cupreous metallic streak from the costa, a small cupreous spot at its outer edge near the costa, and a reddish cupreous spot at its outer edge on the lower margin of the cell; a brownish creamy band, much speckled with fuscous succeeds it, containing the usual dark-margined metallic dot in its upper half, and the usual geminate black patch, obliquely divided by an ochreous line, with metallic lines in the black on either side above the tornus; a dark brown, outwardly curved band, margined by a cupreous metallic line, precedes a dull olivaceous ochreous apical and partially terminal band, beyond which the brownish cilia are dusted, especially along their base, with brownish creamy. *Exp. al.* 14 mm. *Hindwings* and cilia dull cinereous, the former much shaded, especially toward the apex and termen, with brownish fuscous, the latter with two shade-lines. *Abdomen* dull brownish cinereous. *Legs* brownish creamy, with brown annulations on tibiae and tarsi.

*Type* ♂ (66688) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: SACATEPEQUEZ: Volcan de Agua, 8500-10,500 ft., 13. I. 1881 (G. C. Champion). Unique.

Near *leucobasis* Frnld., but with the basal patch distinctly darker—less white.

### 4. *Porpe enantia*, sp. n.

*Antennae* annulate black and white. *Palpi* with mixed brownish fuscous and whitish scales. *Head* fuscous, dusted with whitish. *Thorax* fuscous. *Forewings* with a white basal patch reaching to one-fifth, scarcely convex outwardly, and with a slight dusting of fuscous; beyond this is an ochreous brown band, wider on the costa than on the dorsum, containing much fuscous shading, especially on the dorsum and on its outer edge at the costa—also containing, before its middle, a straight steel-bluish metallic streak, arising from a few white scales on the costa, bent outward toward a small metallic spot on the lower edge of the cell; a similar spot lies at the outer edge of the band near the costa, and is followed by two small white costal spots, bounding the upper edge of a broader transverse whitish band, much streaked and speckled with fuscous, and including, first, a dark-margined metallic dot on the upper edge of the cell, and secondly a geminate black patch above the fold, reaching nearly to the tornus, and containing lines of metallic scales on either side of an ochreous line, which separates the two sides of the patch obliquely; beyond is an outwardly curved, narrow, dark brownish band, margined externally toward the apex by a steel-blue metallic line separating it from an ochreous apical patch, narrowly produced downward along the termen, and bounded by a black line at the base of the fuscous cilia, which are sparsely sprinkled with white. *Exp. al.* 11-12 mm. *Hindwings* in the ♂ bluish white, with a blackish border, widest at the apex and tapering nearly to the flexus; in the ♀ white, but almost entirely suffused with dark brownish fuscous; cilia fuscous, touched with white along their middle and at their tips. *Abdomen* blackish, with some white along the edges of the segments. *Legs* white, with blackish annulations on tibiae and tarsi.

*Type* ♂ (5934); ♀ (5935); PTT. (5936-7 Wlsm. Det. 1908) US. Nat. Mus. [PTT. (33952-4) Mus. Wlsm. BM.]

*Hab.* MEXICO: VERA CRUZ: Cordova, XII-III. 1908 (F. Knab). Seven specimens.

Allied to *schausiella* Busck, but, unlike that species, having always a more or less clearly defined white basal patch, beyond which the first dark band is somewhat broader.



5. *Porpe lactibasis*, sp. n. (Tab. IX. fig. 17.)

*Antennae* white, with black annulations. *Palpi* cream-white, mixed with fuscous. *Head* and *Thorax* cream-white. *Forewings* with a cream-white basal patch extending to nearly one-fourth, scarcely wider on the dorsum than on the costa; followed by a yellowish brown band, shaded with darker brown and becoming nearly evanescent toward the dorsum—this contains the usual steely metallic costal streak, tipped with white above before its middle, and the metallic subcostal spot at its outer edge, and is succeeded by a broader creamy white band, in which lies the black patch above the tornus, obliquely divided by an ochreous line, on either side of which the black contains metallic scaling; this whitish band, speckled with brown toward the costa above the upper metallic dot, shows at its inner edge, about the end of the cell, a patch of bluish black speckling, and a larger one of the same at its outer edge toward the apex, where a steel-blue metallic line separates it from the brownish ochreous apical band, which is not produced downward along the termen; cilia brownish, with a line of fuscous scales along their paler, almost whitish, base. *Exp. al.* 12 mm. *Hindwings* bluish white, with broad apical and narrow dorsal brown border; cilia whitish, with a narrow dark brown shade-line near their base, followed by a broader and paler brown shade along their middle. *Abdomen* white. *Legs* white, with brownish annulations on tibiae and tarsi; the hind tarsi tipped with white.

*Type* ♂ (66689) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: SACATEPEQUEZ: Dueñas, 4500 ft., VI–VII. 1879 (*G. C. Champion*).  
Unique.

Allied to *venusta* Wlsm., but differing in the cream-white, not snow-white, base to the forewings, and in the partial evanescence of the brown band toward the dorsum; from *leucobasis* Frnld. it can be easily separated by the same characters, and from *pelinobasis* Wlsm. by its white hindwings.

6. *Porpe venusta*, sp. n. (Tab. IX. fig. 18.)

*Antennae* white, barred with blackish above. *Palpi* obliquely erect, median joint with projecting bristles beneath, terminal joint shorter, acuminate; white. *Head* and *Thorax* white. *Forewings* snow-white to one-third from the base, with a small brown spot below the fold near the base; at one-third is a broad brown transverse band, its inner margin straight and clearly defined, its outer margin bounded above the middle by a white patch, more or less suffused with brownish, and below the middle produced outward to the tornus, before which it is broken by a whitish dorsal spot; the central band has some shining, green-metallic streaks and spots along its middle and at its outer edge, accompanied by some black scaling, and the tornal projection contains two similar metallic streaks with black scales running through it transversely, parallel to the termen, the space between them being somewhat ferruginous; the apical and terminal area is brown, mixed with fuscous, and contains an anteapical, transverse, shining metallic streak, beyond which the apex is ferruginous; cilia white, brownish ferruginous along their base. *Exp. al.* 12 mm. *Hindwings* bluish white, with a broad dark brown apical band, produced, but partly interrupted and gradually diminished along the margin beneath; cilia bluish white, with a brown line along their base. *Abdomen* bluish white. *Legs* white, narrowly banded with brown.

*Type* ♀ (66690) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

7. *Porpe schausiella* Busck.

*Choreutis schausiella* Busck Pr. Ent. Soc. Wash. 8 86–7 (1907)<sup>1</sup>.

*Type* ♂ (9888) US. Nat. Mus. [*PT.* (33951) Mus. Wlsm. BM.]

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Las Vigas (*W. Schaus*)<sup>1</sup>; Jalapa (*W. Schaus*)<sup>1</sup>.

[Las Vigas (or Las Vegas), near Jalapa, is almost certainly the locality from which the type came—not “Las Vegas, New Mexico” as recorded. Drnt.]



### 8. *Porpe tacubayella* Krft.

*Choreutis tacubayella* Krft. Jr. NY. Ent. Soc. 16 181-2 (1908)<sup>1</sup>.

*Hab.* MEXICO<sup>1</sup>: MEXICO<sup>1</sup>: Tacubaya (O. W. Barrett)<sup>1</sup>.

### 9. *Porpe charmonica*, sp. n. (Tab. IX. fig. 19.)

*Antennae* distinctly annulate with white and fuscous. *Palpi*, with the long divided brush on the median joint streaked and speckled with white and fuscous; the terminal joint tipped with fuscous. *Head* cinereous. *Thorax* olive-brown, anteriorly sprinkled with cinereous; underside whitish. *Forewings* olive-brown at the base, blending into rich chestnut-brown toward the middle; a small triangular patch, on the costa at one-fourth, is sprinkled with cinereous scales and followed, at a little before the middle, by a steel-blue metallic band, descending obliquely outward from a minute white costal spot to the fold, where it joins the profusely speckled outer half of the wing, forming, together with a shorter inverted metallic streak, also arising from a small white costal spot, a V-shaped figure enclosing the middle of the costa; the whole outer half of the wing is profusely sprinkled with cinereous, the brown ground-colour reappearing only in a short transverse streak around the base of the apical cilia, and in a slender oblique broken line of scales, crossing the middle of the black ocelloid patch, which is margined internally and externally by groups of steel-grey metallic scaling; above the ocelloid patch is a pale ochreous line at its upper edge, and in the speckled space above it two small steel-blue spots and a narrow transverse band of the same before the apex; cilia speckled with fuscous and pale cinereous. *Exp. al.* 10 mm. *Hindwings* brownish fuscous; cilia paler, with a double shade of the wing-colour running through them. *Abdomen* brownish fuscous, speckled transversely with pale cinereous—whitish beneath; anal tuft fuscous. *Legs* pale cinereous, the tarsi and ends of the tibiae banded with fuscous.

*Type* ♂ (66675) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (H. H. Smith). Unique.

## TORTYRA Wkr.

=SAPTHA Wkr.; =BADERA Wkr.; =CHOREGIA (Z.) F. & R.; =CHORDATES Snln.

Type 1: *Tortyra spectabilis* Wkr.

TORTYRA Wkr. Cat. Lp. BM. 28 510-11 no. 25 sp. 1-2 (1863); Wlsm. Pr. Z. Soc. Lond. 1891 528-9, 546 no. 52 sp. 105 (1892); 1897 120-1 no. 57 sp. 161 (1897); Meyr. Pr. Linn. Soc. NSW. 32:1907 50, 97-100 no. 30 sp. 159-63 (1907).

### 1. *Tortyra chalcodes*, sp. n.

*Antennae* thickened, to three-fourths of their length, with rich bronzy purplish scales; a white band around them beyond the thickened portion, the apex bronzy fuscous. *Palpi* projecting the length of the head beyond it, the smooth median joint shining steel-green; the short terminal joint bronzy fuscous. *Head* bronzy fuscous; face steel-green. *Thorax* bronzy fuscous, with a rich purple sheen. *Forewings* with a bright purple basal patch to one-fourth, having a jet-black costal spot at the base, with some steel-green scales below and behind it; beyond the basal patch is a nearly straight bright aeneous band, becoming purple at its costal extremity, narrowly margined before and behind by tawny blackish lines, which separate it on either side from broader bands of diffused shading, composed of alternate lines of brownish fuscous and whitish cinereous, the outer band, somewhat diffused outward on its upper half; beyond this the remaining surface of the wing to the termen and apex is rich bright shining cupreous, with greenish golden reflections, tending to lilac along the costa; in this space are four jet-black lines radiating from the upper angle of the cell, but not reaching the apex, these become shorter in progression upward; a short jet-black line follows vein 2 a little inward from the termen; cilia bright bronzy cupreous. *Exp. al.* 19 mm. *Hindwings* broadly triangular, through the extension of the flexus; dull bronzy brown

cilia grey, with a brown line along their base; underside brown, with greenish grey reflections. Abdomen brown. Legs bronzy brown, with three white tarsal bands.

Type ♀ (4719, *Las Vigas*) Mus. Wlsm. BM. [PT. (66691) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*)—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., 1880 (*G. C. Champion*). Two specimens.

## 2. *Tortyra fulgens* F. & R.

*Choregia fulgens* F. & R. Reise Nov. Zool-Lp. 2 Pf. 140·17 (1875)<sup>1</sup>; Z. Hor. Soc. Ent. Ross. 13 192–5 sp. 1 (1877)<sup>2</sup>. *Tortyra fulgens* Wlsm. Pr. Z. Soc. Lond. 1891 529 (1892)<sup>3</sup>: 1897 121 sp. 161 (1897)<sup>4</sup>.

Type ♂ (1913: 86, *Bogota*) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: MICHOACAN: Uruapan, III. 1906 (*W. Schaus*)—COSTA RICA: San Francisco de Guadalupe, XI. 1896 (*Mus. Joannis*). South America<sup>1-4</sup>—COLOMBIA<sup>1-4</sup>: CUNDINAMARCA<sup>1-3</sup>; Bogota (*Lindig*)<sup>1</sup>, III.<sup>2</sup> (*Baron v. Nolcken*)<sup>1-2</sup>; Fusagasuga (*B. v. Nolcken*)<sup>2</sup>; Pandi (*B. v. Nolcken*)<sup>2</sup>—BRAZIL<sup>1-2</sup>: MATTO GROSSO<sup>1-2</sup>: Cubaja, 1823 (*Natterer*)<sup>1-2</sup>: CHILE<sup>4</sup> (=PERU<sup>4</sup>): TACNA<sup>4</sup>: Arica, ⊕ *Ficus* sp. (*Kenderdine*)<sup>4</sup>.

## 3. *Tortyra argentifascia*, sp. n.

=\**Tortyra spectabilis* (p.) Wkr. Cat. Lp. BM. 28 510 sp. 1 (1863)<sup>1</sup>.

*Antennae* clothed with bright purple scales to two-thirds, thence shining, silvery. *Palpi* shining, steel-grey. *Head* shining, steel-green. *Thorax* shining, iridescent steel-grey, with a dark purplish fuscous line down each side, just within the tegulae. *Forewings* dark fuscous, profusely covered with minute transverse steel-grey strigulae, which, beyond the middle, are broken up into fine dusting, impinging, especially towards the costa, upon the brilliant coppery purple which overflows the whole outer third of the wing; a little before the middle is a brightly shining steel-grey fascia, narrow and nearly straight, slightly iridescent, and narrowly bordered on either side by dark purplish fuscous; a small, shining, steel-grey patch, at the base of the wing, is bounded on its outer edge with black, but only above the fold; cilia dark, shining, bronzy fuscous, with greenish reflections. *Exp. al.* 13·5 mm. *Hindwings* dark tawny brown, the cilia beyond their brown base pale leaden grey. *Abdomen* dark brownish fuscous. *Legs* dark purplish fuscous, with white annulations.

Type ♀ (66692, *Atoyac*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (5942–4, 5947–8) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*); Cordova, V. 1908 (*F. Knab*); Jalapa (*W. Schaus*): OAXACA: Salina Cruz (*W. Schaus*). South America<sup>1</sup>—BRAZIL<sup>1</sup>: PARA<sup>1</sup>: Pará (*H. W. Bates*); Santarem (*H. W. Bates*)<sup>1</sup>: AMAZONS<sup>1</sup>: Ega (*H. W. Bates*)<sup>1</sup>. Thirteen specimens.

This species differs from *fulgens* F. & R. and *chalcodes* Wlsm. in the narrower and paler metallic fascia before the middle, and in the steely spot at the base of the forewings. *Tortyra spectabilis* Wkr. was described from six specimens, of these *b* (Ega) and *f* (Santarem) belong to *argentifascia* Wlsm., as does also an added specimen from Pará—the other specimens in Walker's series are at once distinguished by the fascia being of the ground-colour of the wing.

## RHOBONDA Wkr.

n. syn. = MELANOXENA Dgn.

Type 1: *Rhobonda gaurisana* Wkr. (Wkr. 1863).

RHOBONDA Wkr. Cat. Lp. BM. 28 424-5 no. 48 sp. 1 (1863).

Type 2: *Melanoxena falsissima* Dgn. (Dgn. 1910).

MELANOXENA Dgn. Ann. Soc. Ent. Belg. 54 121-2 (1910).

1. *Rhobonda gaurisana* Wkr.

*Rhobonda gaurisana* Wkr. Cat. Lp. BM. 28 425 sp. 1 (1863)<sup>1</sup>.

Type ♀ (1850:5) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: San Juan, 600 ft., 1887 (*W. Schaus*); Vera Cruz, I. 1888 (*H. H. Smith*); Atoyac, IV. (*H. H. Smith*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 2950 ft., 1879-80 (*G. C. Champion*)—HONDURAS: BAY I<sup>s</sup>, Ruatan Id. (*Gaumer*)—PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). South America<sup>1</sup>—BOLIVIA: LA PAZ: Songo (*G. Garlepp*)—BRAZIL<sup>1</sup>: RIO DE JANEIRO<sup>1</sup>: Rio Janeiro<sup>1</sup>, (*W. Schaus*).

## HEMEROPHILA Hb.

=SIMAETHIS Leach; =CHOREUTIS Hb.; =GAURIS Hb.; =EUTROMULA Fröl.; etc.

Type 1: [*Phalaena Tortrix*] *pariana* Cl. (Hb. 1806).

HEMEROPHILA Hb. Tent. 2 (1806). CHOREUTIS Hb. Verz. Schm. 373 sp. 3574-8 (1826).

EUTROMULA Fröl. Enum. Tort. Würt. 11 (1828). HEMEROPHILA Frnld. Can. Ent. 32 236-7, 238, 239-40 (1900); Wlsm. Pr. Z. Soc. Lond. 1907 988-9 no. 54 sp. 109-10 (1908).

Type 3: *Phalaena Tortrix albertiana* Stoll (Hb. 1821; Frnld. 1900).

GAURIS Hb. Smlg. Exot. Schm. (Index Exot. Lp. Pl. 1-244) p. [1] (22. XII. 1821): Verz. Schm. 374 sp. 3582-4 (1826); Frnld. Can. Ent. 32 236-7 (1900).

1. *Hemerophila albertiana* Stoll.

n. syn. = *siphana* Sepp; = *zebra* Wkr.

*Phalaena Tortrix albertiana* Stoll, Crmr. Pap. Exot. 4 163 Pf. 372·F (1781), 247 (1782), Essai Syst. Lp. 27 (1782)<sup>1</sup>; Herbst Einl. Kennzt. Ins. 2 128 sp. 54 Pf. 46 E·2 (1785)<sup>2</sup>. *Hemerophila Perlaeta albertiana* Hb. Smlg. Exot. Schm. 1 p. [4] Pf. [213]·1-4 (1819)<sup>3</sup>. *Gauris albertiana* Hb. Smlg. Exot. Schm. (Index Exot. Lp. Pl. 1-244) p. [1] (22. XII. 1821)<sup>4</sup>; Verz. Schm. 374 sp. 3582 (1826)<sup>5</sup>. *Pyrallis albertiana* Vrlrn. Cat. Syst. Crmr. 138, 263 (1837)<sup>6</sup>. *Phalaena (Tortrices) siphana* Sepp Surinaam. Vlind. 2 139-40 Pl. 66 (1852)<sup>7</sup>. *Agrophila zebra* Wkr. Cat. Lp. BM. 12 774 sp. 6 (1857)<sup>8</sup>. *Gauris albertiana* Wkr. Cat. Lp. BM. 28 413 sp. 1 (1863)<sup>9</sup>. *Simaethis albertiana* Snln. Tijd. Ent. 18: 1874-5 72, 73 (1875)<sup>10</sup>; Z. Hor. Soc. Ent. Ross. 13 179-81 sp. 5 (1877)<sup>11</sup>. *Hemerophila* (= *Gauris* Hb.) *albertiana* Frnld. Can. Ent. 32 236-7 (1900)<sup>12</sup>.

Types ♂ ♀: *albertiana* Stoll (Surinam) Coll. W. Van der Meulen; *siphana* Sepp (Suriname).....?; *zebra* Wkr. ♀ (1851:119, Amazons) BM.

*Hab.* AMERICA, C-S-I. **Central America**—PANAMA: PANAMA: La Chorrera, IV-V. 1898 (C. H. Dolby-Tyler): TABOGA 1<sup>D.</sup>, 1. XI. 1881 (J. J. Walker). **West Indies**—TRINIDAD (J. Hart; W. Schaus). **South America**<sup>1-12</sup>—VENEZUELA<sup>11</sup> (Dr. Schneider<sup>11</sup>; W. Schaus)—BRITISH GUIANA (J. Rodway)—DUTCH GUIANA (SURINAME)<sup>1-2, 7, 11</sup>—FRENCH GUIANA: Cayenne (W. Schaus); St. Jean de Maroni, II (E. Le Moult)—BRAZIL<sup>8-9, 11</sup>: PARA<sup>8-9, 11</sup>: Pará<sup>8-9, 11</sup> (G. Grahame)<sup>9</sup>, 6. VI. 1899 (W. A. Churchill): AMAZONS<sup>8-9, 11</sup>: Valley of the Amazons (A. R. Wallace)<sup>8</sup>; Villa Nova (H. W. Bates)<sup>9, 11</sup>; Ega (H. W. Bates)<sup>9, 11</sup>.

[Herbst<sup>2</sup> wrongly recorded Stoll's type as "*aus Ostindien*"!, and Walker<sup>8</sup> states that his type of *zebra* was "From Mr. Bates' collection"—the type is labelled "1851:119" (=R. Amazon, Wallace). Drnt.]

## 2. *Hemerophila felis*, sp. n.

*Antennae* biciliate 2; fuscous, annulate with cream-whitish toward the base. *Palpi* creamy whitish, the terminal joint much shorter than the median, closely appressed to the face, both joints tipped with fuscous. *Head* brownish fuscous. *Thorax* brownish fuscous, a band of cream-white across its anterior margin; underside white. *Forewings* with the costa evenly arched, termen oblique, slightly convex; brownish fuscous, with a vinous suffusion; a transverse creamy white band, at one-fourth of the wing-length, emits from the middle of its outer side a similar band, of the same width, descending obliquely to the tornus from the middle of the costa; a rather narrower creamy white band, slightly convex outwardly, also descends obliquely outward, nearly meeting the lower extremity of a narrow band of the same colour, from the costa near the apex, parallel with the termen—these three are all merged in a bright orange-ochreous patch at the tornus, in which is a single dark spot; cilia of the same colour as the forewings, except along the margin of the ochreous patch. *Exp. al.* 14-19 mm. *Hindwings* brownish fuscous, with an elongate streak along the cell and two small marginal spots beneath it, bright ochreous; cilia tipped with pale greyish. *Abdomen* fuscous, banded with cream-whitish, a band of the same dividing it from the thorax. *Legs* banded with brownish fuscous and cream-whitish.

*Type* ♂ (66713, Teapa); ♀ (66715, Caché) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66714) US. Nat. Mus.]

*Hab.* **Central America**—MEXICO: TABASCO: Teapa, III. (H. H. Smith)—COSTA RICA: Caché (H. Rogers). Three specimens.

The single ♀ (from Caché) differs in the greater development of the orange tornal patch in the forewings—this encroaches on the dark ground-colour along the dorsum, extending above the fold; the subterminal line is not parallel with the termen, and in the hindwings the ochreous spots become blended into a subterminal line. The palpi are almost uniformly dark on the outer side.

## 3. *Hemerophila houttuynialis* Stoll.

*n. syn.* = †*houttuinialis* Stoll, †*houttuynialis* Vrlrn., †*houttuinalis* Z.; = *pulsana* Wkr.

*Phalaena Pyralis houttuinialis* Stoll, Crmr. Pap. Exot. 4 192 Pf. 384 · L (1781), 249 (1782)<sup>1</sup>.

*Botys houttuynialis* Vrlrn. Cat. Syst. Crmr. 143, 272 (1837)<sup>2</sup>. *Gauris houttuinialis* Wkr.

Cat. Lp. BM. 28 414 sp. 3 (1863)<sup>3</sup>. *Gauris pulsana* Wkr. Cat. Lp. BM. 28 417 sp. 13 (1863)<sup>4</sup>.

*Simaethis houttuinalis* Z. Hor. Soc. Ent. Ross. 13 182-3 sp. 6 (1877)<sup>5</sup>.

Type ♂ ♀ : *houltuinialis* Stoll (Surinam) Coll. W. Van der Meulen<sup>1</sup>; *pulsana* Wkr. ♂ (1857 : 20, *Ega*; ♀, 1861 : 21, *Limas*) BM.

*Hab.* AMERICA, C-S. Central America<sup>3-5</sup>—GUATEMALA : ALTA VERA PAZ : Cajabon, 800 ft., II. 1880 (*G. C. Champion*)—BRITISH HONDURAS (= \**HONDURAS*)<sup>3-4</sup> : Limas, near Belize, 1844-5 (*D. Dyson*)<sup>3-4</sup>—PANAMA<sup>5</sup> : CHIRIQUI<sup>5</sup> : (*H. Ribbe*); La Caldera, 1200 ft., VIII. 1881 (*G. C. Champion*). South America<sup>1-5</sup>—BRITISH GUIANA : Bartica, R. Essequibo, 27. VI. 1901 (*H. S. Parish*)—DUTCH GUIANA (SURINAME)<sup>1-2</sup>—FRENCH GUIANA : St. Laurent, Rio Maroni, XI. 1906 (*E. Le Moult*)—BRAZIL<sup>3-5</sup> : PARA<sup>3-5</sup> : Pará (*J. P. G. Smith*)<sup>3, 5</sup>, 17. IX. 1892 (*A. Schulz*); Santarem, X. 1884 (*J. H. Leech*) : AMAZONS<sup>4</sup> : Ega (*H. W. Bates*)<sup>4</sup> : BAHIA : Itaparica Id., 28. XII. 1905 (*G. Meade-Waldo*) : ESPIRITO SANTO : Rio do Espirito Santo, 1872 (*Schmid*).

#### 4. *Hemerophila biferana* Wkr.

= *tristis* F. & R.<sup>5</sup>; = *contubernalis* Z.<sup>5</sup>

*Gauris biferana* Wkr. Cat. Lp. BM. 28 418 sp. 15 (1863)<sup>1</sup>. *Gauris tristis* F. & R. Reise Nov. Zool-Lp. 2 Pf. 138·15 (1875)<sup>2</sup>. *Simaethis contubernalis* Z. Hor. Soc. Ent. Ross. 13 175-6 sp. 2 Pf. 2·63 (1877)<sup>3</sup>. *Gauris biferana* Wlsm. Pr. Z. Soc. Lond. 1891 529, 546 sp. 106 (1892)<sup>4</sup> : 1897 120 sp. 159 (1897)<sup>5</sup>.

Types ♂ ♂ : *biferana* Wkr. ♂ (1855 : 1, *San Domingo*) BM.; *tristis* F. & R. ♂ (1913 : 86, *Amazons*) Roths. Coll. (*Fldr. Coll.*) BM.; *contubernalis* Z. ♂ (*Sommer Coll.*) Mus. Stgr.

*Hab.* AMERICA, C-S-I. Central America—MEXICO : VERA CRUZ : Cordova (*H. Rümeli*)—GUATEMALA : ALTA VERA PAZ : Lanquin, II. 1880 (*G. C. Champion*); Panima, 1800 ft., X. 1879 (*G. C. Champion*). South America<sup>2, 5</sup>—COLOMBIA : MAGDALENA : Santa Marta (*P. Bouchard*)—BRAZIL<sup>2, 5</sup> : AMAZONS (*H. W. Bates*)<sup>2, 5</sup>. West Indies<sup>1, 3-5</sup>—SAN DOMINGO (*Tweedie*)<sup>1, 3-5</sup>.

#### 5. *Hemerophila rimulalis* Z.

*Simaethis rimulalis* Z. Verh. ZB. Ges. Wien 25 : 1875 Abh. 321 (1875)<sup>1</sup> : Hor. Soc. Ent. Ross. 13 174-5 sp. 1 Pf. 2·62 (1877)<sup>2</sup>. *Gauris rimulalis* Wlsm. Pr. Z. Soc. Lond. 1891 529, 546 sp. 107 (1892)<sup>3</sup>. *Simaethis rimulalis* Hdm. Stett. Ent. Ztg. 57 10 (1896)<sup>4</sup>. *Gauris rimulalis* Wlsm. Pr. Z. Soc. Lond. 1897 120 sp. 160 (1897)<sup>5</sup>.

Type ♀ (102219, *St. Thomas*) Mus. Wlsm. BM.

*Hab.* AMERICA, C-S-I. Central America—MEXICO : TABASCO : Teapa, III. (*H. H. Smith*). West Indies<sup>1-5</sup>—CUBA<sup>2-3, 5</sup>—ST. THOMAS<sup>1, 3-5</sup> : 10. IV. (*W. v. Hedemann*)<sup>4-5</sup>. South America—BRAZIL : PARA : Pará, X. 1884 (*J. H. Leech*), 18. IV. 1894 (*A. Schulz*).

#### 6. *Hemerophila gradella*, sp. n.

*Antennae* biciliate 1½; blackish, spotted with white. *Palpi* short, porrect; dull brownish grey. *Head* dark fuscous. *Thorax* brownish fuscous, with pale ochreous speckling. *Forewings* chocolate-brown,



minutely speckled with whitish ochreous; a broad, suffused, bright chestnut band, leaving the costa before the middle, blends to brownish fuscous before reaching the middle of the dorsum where it is slightly curved inward; the speckling on the space beyond it is rather whiter than before it, and the outer portion of the wing becomes more distinctly chestnut-brown under the paler white speckling, while before the apex and along the termen it is rich light chestnut, parallel to the costa before the apex and to the upper two-thirds of the termen below it; a shining, steel-blue, metallic line divides this pale chestnut patch, and is adorned along its inner margin with short jet-black tooth-like streaks; cilia shining, metallic leaden grey, with a blackish line along their base. *Exp. al.* 15 mm. *Hindwings* brownish fuscous, with a golden yellow marginal line, extending through the base of the steely grey cilia and entirely overflowing them about the apex. *Abdomen* dark brownish fuscous, with six conspicuous pale yellow transverse bars across its underside. *Legs* fuscous, banded with pale yellowish.

*Type* ♂ (66706, *Cerro Zunil*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66708; 5910 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab. Central America*—MEXICO: VERA CRUZ: Jalapa (*W. Schaus*)—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., 1880 (*G. C. Champion*). Four specimens.

Allied to *velatana* Wkr. (Cat. Lp. BM. 28 420—*Ega*), but lacking the radiating yellow streaks before the apex of the forewings; the yellow margin of the hindwings does not occur in *velatana*.

### 7. *Hemerophila immarginata*, sp. n.

*Antennae* fuscous, with pale cinereous bars above. *Palpi* (missing). *Head* brownish. *Thorax* fuscous. *Forewings* dark brownish fuscous, suffused and sprinkled with pale cinereous, especially about the outer edge of a basal patch and on a broad band beyond the middle, which is separated from the basal patch by a dark chocolate-brown costal band, reaching to the fold and slightly tinting the fuscous ground-colour below the fold, as far as the dorsum before the middle; beyond the broad mottled band which succeeds this, the apical and terminal portions of the wing is dark reddish orange, a rather shining leaden-grey line running through this colour, forming an angle corresponding to the apex, its upper part not quite reaching the costa, its lower part parallel to the termen and blending with the cinereous mottling above the tornus; cilia shining, steel-grey, with a black line along their base. *Exp. al.* 14 mm. *Hindwings* brownish fuscous; cilia leaden grey. *Abdomen* (missing). *Legs* dark brownish fuscous, with pale cinereous annulations.

*Type* ♂ (66684, *V. de Irazu*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*Type* ♀ (5909 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab. Central America*—COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Two specimens.

The type of this species is in bad condition, one side being much damaged, and the abdomen and palpi missing, but the right wings are uninjured, and it is sufficiently distinct to merit description. Allied to *gradella* Wlsm., but lacking the black tooth-like projections on the inner edge of the metallic subapical line in the forewings—the different direction of the chocolate-brown fascia before the middle also serves to separate the two species, and the yellow margin, so conspicuous on the hindwings of *gradella*, is absent in *immarginata*.

### 8. *Hemerophila cinctipes* F. & R.

*Gauris cinctipes* F. & R. Reise Nov. Zool-Lp. 2 Pf. 138 · 20 (1875) <sup>1</sup>.

Type ♂ (1913 : 86) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: La Caldera, 1200 ft., VIII. 1881 (*G. C. Champion*): CANAL ZONE: Tabernilla, VI. 1908 (*A. Busck*). South America<sup>1</sup>—COLOMBIA: MAGDALENA: 2000 ft., VI. 1899 (*H. H. Smith*)—BRAZIL<sup>1</sup>: AMAZONS (*H. W. Bates*)<sup>1</sup>.

The specimens from Panama and Colombia agree with the Type in the number and position of the markings, but they are distinctly smaller, and the greater predominance of the sprinkling of white scales along the margins of the darker spaces, especially above the tornus, give them a somewhat different appearance; the basal patch may perhaps be said to be somewhat less bent on its outer edge, but the Type being unique it would be rash to regard the Central American form as more than a geographical subspecies which may be known as *isthmia*, var. n. [*an sp. n.?*] Sixteen specimens. Type ♂ (67052); ♀ (67053) *La Caldera*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (5917-25 Wlsm. Det. 1908) US. Nat. Mus.]

### 9. *Hemerophila contrariana* Wkr.

*Gauris contrariana* Wkr. Cat. Lp. B.M 28 420 sp. 18 (1863) <sup>1</sup>.

Type ♂ (1852 : 14) BM.

*Hab.* AMERICA, C-S. Central America—GUATEMALA: ALTA VERA PAZ: Teleman, 13-18. V. 1880 (*G. C. Champion*). South America<sup>1</sup>—FRENCH GUIANA: St. Jean, Rio Maroni (*W. Schaus*)—BRAZIL<sup>1</sup>: PARA<sup>1</sup>: Pará (*H. W. Bates*)<sup>1</sup>.

### 10. *Hemerophila xutholopa*, sp. n. (Tab. IX. fig. 20.)

*Antennae* biciliate 1 in the ♂; blackish, barred with white on the basal half above. *Palpi* tawny brownish grey above; white beneath. *Head* and *Thorax* tawny brownish grey; the latter white beneath. *Forewings* tawny brownish grey, minutely speckled with rosy whitish scales—these are mainly distributed in two slightly outwardly curved and diffused transverse bands, the first at one-fourth, the second about the middle, and in a small costal patch before the apex; the termen and apex are narrowly pale orange-yellow, and before the margin a waved and angulate band of the same straggles across the wing, sending inward toward the base, first a short straight dash below the costa, margined by a few black scales, secondly a wide bow opposite the middle of the termen, and thirdly a short oblique dash from near the tornus; cilia black at the base, shining silvery at their tips. *Exp. al.* 14 mm. *Hindwings* orange-yellow, with a tawny grey streak from the base below the cell, and another, near the limbus, not quite reaching the flexus; before and parallel to the termen is a rather broad blackish band; cilia tawny grey. *Abdomen* dull greyish ochreous, white beneath. *Legs* tawny grey, with white bands.

Type ♂ (66720) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa III. (*H. H. Smith*). Unique.

This species differs from *contrariana* Wkr. in its yellow hindwings, but in the pattern and colouring of the forewings it is almost precisely similar.

11. *Hemerophila plutusana* Wkr. (Tab. IX. fig. 21.)

n. synn. = *rutilella* Wkr.; = *scintillana* Wkr.; = *aeneigutta* F. & R.

*Simaethis plutusana* Wkr. Cat. Lp. BM. 28 453 sp. 9 (1863)<sup>1</sup>. *Simaethis rutilella* Wkr. Cat. Lp. BM. 28 453 (1863)<sup>2</sup>. *Simaethis scintillana* Wkr. Cat. Lp. BM. 28 454 sp. 11 (1863)<sup>3</sup>. *Choreutis? aeneigutta* F. & R. Reise Nov. Zool-Lp. 2 Pf. 138·2 (1875)<sup>4</sup>.

*Types* ♂ ♀: *plutusana* Wkr. ♂ (1857:20, *Ega*) BM.; *rutilella* Wkr. ♀ (1857:20, *Ega*) BM.; *scintillana* Wkr. ♂ (1858:6, *Ega*) BM.; *aeneigutta* F. & R. ♂ (1913:86, *Amazons*) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). South America<sup>1-4</sup>—BRAZIL<sup>1-4</sup>: AMAZONS<sup>1-4</sup>: *Ega* (*H. W. Bates*)<sup>1-3</sup>.

## CALANTICA Z.

Type: *Calantica albella* Z. (Z. 1847; Busck 1912).

CALANTICA Z. Isis 40: 1847 811-12 (1847); HS. SB. Schm. Eur. 5 8, 27 (1853), 90 no. 25 sp. 119-20 (1854), Pf. 40·272-3 (1850): 6 Pf. XI·9-11 (1853); Stgr-Rbl. Cat. Lp. Pal. 2 131 no. 275 sp. 2344-5 (1901); Chrt. Nat. 27 (2 s. 19) 65 (1905); Busck Pr. Ent. Soc. Wash. 14: 1912 85-6 (1912).

1. *Calantica argentea* Busck.

*Calantica argentea* Busck Pr. Ent. Soc. Wash. 14: 1912 86 (1912)<sup>1</sup>.

Type ♂ (14527) US. Nat. Mus. [*PT.* (33923) Mus. Wlsm. BM.]

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Orizaba, VIII. (*R. Müller*)<sup>1</sup>.

## Fam. 16. COLEOPHORIDAE.

## COLEOPHORA Hb.

= *HAPLOPTILIA* Hb.; etc.

Type: *Tinea anatipennella* Hb. 186 (Hb. 1806).

COLEOPHORA Hb. Tent. 2 (1806). *HAPLOPTILIA* Hb. Verz. Schm. 428 sp. 4168-76 (1826). COLEOPHORA Stgr-Rbl. Cat. Lp. Pal. 2 189-200 no. 412 sp. 2631-3913 (1901); Dyar Bull. US. Nat. Mus. 52 530-4 sp. 5989-6056 (1902).

1. *Coleophora decipiens*, sp. n.

*Antennae* with the basal joint thickened, but not tufted; white. *Palpi* with a few projecting scales on the median joint at the apex beneath; white. *Head* and *Thorax* white, slightly tinged with ochreous. *Forewings* shining, white, the veins beyond the middle somewhat indistinctly delineated by yellowish ochreous lines, one along the cell being continued to the base parallel with another below the fold; between these lines are a few scattered brownish fuscous scales, especially near the base of the costal cilia, which are tinged throughout with yellowish ochreous, those on the dorsum inclining to brownish cinereous. *Exp. al.* 12 mm. *Hindwings* pale grey; cilia pale brownish cinereous. *Abdomen* cinereous, anal tuft whitish ochreous. *Legs* whitish, with a slender brownish grey line along the outer side of the tibiae.

Type ♂ (65979, *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (65982-3) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*); *Amula*, 6000 ft., VIII. (*H. H. Smith*). Five specimens.

## BATRACHEDRA Stn.

=†*BATRACHETRA* Dyar; =\**HOMALEDRA* (nec Busck) Wlsm.

Type: *Gracillaria praeangusta* Hw. (Stn. 1854).

BATRACHEDRA Stn. Ins. Br. Lp-Tin. 225, 230-1 no. 4 sp. 1-2 Pf. 7·5<sup>a-c</sup> (1854); Stgr-Rbl. Cat. Lp. Pal. 2 185 no. 389 sp. 3560-2 (1901). †*BATRACHETRA* Dyar Bull. US. Nat. Mus. 52 534 sp. 6058-60·1 (1902). \**HOMALEDRA* (nec Busck) Wlsm. ante 9 (1909).

1. *Batrachedra knabi* Wlsm. (Tab. I. fig. 8.)

*Homaledra knabi* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 9 sp. 1 Pf. 1·8 (1909)<sup>1</sup>. *Batrachedra knabi* Busck, Smithson. Misc. Coll. 59 (4) 2 (1912)<sup>2</sup>.

Type ♀ (5972 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Cordova, V. 1908 (*F. Knab*)<sup>1</sup>.

## TOCASTA Busck.

Type: *Tocasta priscella* Busck (Busck 1912).

TOCASTA Busck, Smithson. Misc. Coll. 59 (4) 4 (1912).

1. *Tocasta priscella* Busck.

*Tocasta priscella* Busck, Smithson. Misc. Coll. 59 (4) 4 (1912)<sup>1</sup>.

Type ♂ (14562) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: Cabima, V. (*A. Busck*)<sup>1</sup>.

## Fam. 17. HELIODINIDAE.

## PSEUDASTASIA Wlsm.

Type: *Pseudastasia opulenta* Wlsm. (Wlsm. 1909).

PSEUDASTASIA Wlsm. ante 1-2 sp. 1 tf. 1 Pf. 1·5 (1909); Busck, Smithson. Misc. Coll. 59 (4) 2 (1912).

1. *Pseudastasia opulenta* Wlsm. (Tab. I. fig. 5.)

*Pseudastasia opulenta* Wlsm. ante 1-2 sp. 1 tf. 1 Pf. 1·5 (1909)<sup>1</sup>.

Type ♂ (65998) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Bugaba, 800-1000 ft. (*G. C. Champion*)<sup>1</sup>.

## SCELORTHUS Busck.

Type: *Scelorthus pisoniella* Busck (Busck 1900).

SCELORTHUS Busck Jr. NY. Ent. Soc. 8 239-41 Pf. 9·4 (1900); Wlsm. ante 2 sp. 1 (1909); Busck, Smithson. Misc. Coll. 59 (4) 2 (1912).

1. *Scelorthus calcifer* Wlsm.*Scelorthus calcifer* Wlsm. ante 2 sp. 1 (1909)<sup>1</sup>.Type ♂ (65999) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66000) US. Nat. Mus.]*Hab.* MEXICO<sup>1</sup>: MORELOS<sup>1</sup>: Cuernavaca, VI. (*H. H. Smith*)<sup>1</sup>: GUERRERO<sup>1</sup>: Tierra Colorada, 2000 ft., X. (*H. H. Smith*)<sup>1</sup>.

## EMBOLA Wlsm.

Type: *Embola xanthocephala* Wlsm. (Wlsm. 1909).

EMBOLA Wlsm. ante 3-4 sp. 1-2 tf. 2 Pf. 1·6 (1909).

1. *Embola xanthocephala* Wlsm.*Embola xanthocephala* Wlsm. ante 3-4 sp. 1 tf. 2 (1909)<sup>1</sup>.Type ♀ (66001) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66003) US. Nat. Mus.]*Hab.* MEXICO<sup>1</sup>: TABASCO<sup>1</sup>: Teapa, III. (*H. H. Smith*)<sup>1</sup>.2. *Embola dentifer* Wlsm. (Tab. I. fig. 6.)*Embola dentifer* Wlsm. ante 4 sp. 2 Pf. 1·6 (1909)<sup>1</sup>.Type ♂ (66004) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.*Hab.* MEXICO<sup>1</sup>: MORELOS<sup>1</sup>: Cuernavaca, VI. (*H. H. Smith*)<sup>1</sup>.

## Fam. 18. HYPONOMEUTIDAE.

## SCHRECKENSTEINIA Hb.

= *CHRYSOCORYS* Crt.Type: *Tinea festaliella* Hb. (Hb. 1826; Crt. 1833).SCHRECKENSTEINIA Hb. Verz. Schm. 419 sp. 4083 (1826). *CHRYSOCORYS* Crt. Ent. Mag. 1 191 no. 1039 sp. 1 (1833). SCHRECKENSTEINIA Stgr-Rbl. Cat. Lp. Pal. 2 179 no. 382 sp. 3405 (1901); Dyar Bull. US. Nat. Mus. 52 544 sp. 6176-8 (1902).1. *Schreckensteinia jocularis*, sp. n. (Tab. IX. fig. 22.)*Antennae* brownish grey. *Palpi* about as long as the head; pale bronzy. *Head* and *Thorax* pale shining bronzy. *Forewings* pale yellowish bronzy, with longitudinal fuscous shades—one beneath the costa, running from base to apex; another along the cell, somewhat darkened and dilated at the end of the cell, attenuated beyond it and dilated again before the apex; another, from the base along the fold, with a fuscous suffusion also, along the termen, narrowly connected with the lower angle of the cell; the extreme margins narrowly pale yellowish bronzy, except toward the base, a short metallic streak beneath the base of the costa; cilia bronzy fuscous. *Exp. al.* 16 mm. *Hindwings* and cilia dark brownish grey. *Abdomen* fuscous. *Legs* brownish grey.Type ♂ (66047) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.*Hab.* GUATEMALA: SACATEPEQUEZ: Volcan de Agua, 8500-10,500 ft., 13. I. 1881 (*G. C. Champion*). Unique.

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## APOSTIBES Wlsm.

=\**SCYTHRIS* (nec Hb.) Dyar.

Type: *Apostibes griseilineata* Wlsm. (Wlsm. 1907).

APOSTIBES Wlsm. Ent. Mo. Mag. 43 57-8 no. 384·2 sp. 3539·2 (1907): 45 46, 52 (1909).

\**SCYTHRIS* Dyar Bull. US. Nat. Mus. 52 537-8 sp. 6104-16 (1902).

1. *Apostibes euthia*, sp. n. (Tab. IX. fig. 23.)

*Antennae* bronzy fuscous. *Palpi* white at the base beneath. *Head* and *Thorax* pale bronzy, the latter white beneath. *Forewings* pale bronzy, with a slight brownish tinge in some lights, a slender whitish cinereous line from the middle of the base runs along the fold nearly to its outer extremity, slightly diffused and diluted upward at the end of the cell; cilia bronzy fuscous. *Exp. al.* 11 mm. *Hindwings* dark bronzy fuscous; cilia rather paler. *Abdomen* shining, bronzy fuscous, with greenish reflections; white beneath. *Legs* white beneath, bronzy fuscous above.

Type ♀ (66722) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Unique.

2. *Apostibes mesopora*, sp. n. (Tab. IX. fig. 24.)

*Antennae* dark purplish fuscous. *Palpi* dark purplish fuscous, white at the base beneath. *Head* and *Thorax* shining, dark purplish fuscous. *Forewings* dark bronzy fuscous, with a whitish cinereous line running from the middle of the base to the end of the cell, and thence, less conspicuously, to the apex and through the bronzy apical cilia; dorsal cilia dark purplish fuscous. *Exp. al.* 14 mm. *Hindwings* dark purplish fuscous; cilia scarcely paler. *Abdomen* dark purplish fuscous, with iridescent reflections; white beneath. *Legs* pale bronzy.

Type ♀ (66725) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (H. H. Smith). Unique.

This differs from *euthia* Wlsm. in its larger size and darker colouring; in the median streak taking the line of the cell, instead of that of the fold, and in being faintly continued to the apex.

3. *Apostibes aerata*, sp. n. (Tab. IX. fig. 25.)

*Antennae* dark fuscous above, paler beneath. *Palpi* white, smeared with fuscous beneath. *Head* shining brassy, the face becoming whitish towards the palpi. *Thorax* bronzy cupreous; silvery white beneath. *Forewings* shining, pale brassy greenish, becoming more coppery towards the costa and at the apex; a white streak coming from the base below the costa terminates in the fold at about one-fourth, a white patch lying a little beyond it and reaching the costa before the middle, a similar white patch, bent inward from the costa before the apex and reverting to the dorsum at the end of the fold; cilia hoary at the apex, dark purplish grey on the dorsum. *Exp. al.* 12 mm. *Hindwings* dark reddish fuscous; cilia dark purplish grey. *Abdomen* shining, dark bronzy fuscous; silvery white beneath. *Legs* white, with two transverse bronzy fuscous bars on the outer sides of the hind tibiae.

Type ♂ (66723) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Unique.

4. *Apostibes nivisignata*, sp. n. (Tab. IX. fig. 26.)

*Antennae* bronzy fuscous. *Palpi* pale bronzy fuscous. *Head* and *Thorax* shining, pale bronzy fuscous. *Forewings* shining, pale bronzy fuscous, becoming dark purplish fuscous at the apex and through the

apical cilia; from the middle of the base runs a silvery white streak along the fold, nearly to the wing-middle, where it is suddenly depressed and diffused to the dorsum; this is followed by a large, transverse, silvery white patch at the end of the cell, reaching the dorsum, and nearly reaching the costa, slightly bowed inward at its middle; cilia dark bronzy fuscous. *Exp. al.* 11 mm. *Hindwings* and cilia dark bronzy fuscous. *Abdomen* bronzy fuscous above, broadly white beneath before the anal segment. *Legs* bronzy greyish.

*Type* ♀ (66724) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### ANCHIMACHETA, gen. n.

(ἀγχιμαχῆτις = fighting hand-to-hand.)

*Type*: *Anchimacheta capnodes* Wlsm.

*Antennae* simple. *Labial Palpi* long, recurved, reaching as high as the vertex (in the dead insect somewhat porrect); terminal joint nearly as long as median, both joints somewhat thickened with scales. *Maxillary Palpi* and *Haustellum* rudimentary. *Head* somewhat thickly clothed. *Thorax* smooth. *Forewings* elongate, rather narrow, apex depressed, rounded, termen obliquely rounded to dorsum: *neuration* 12 veins, all separate; 7 to costa; cell narrow, very long as compared with the apical veins, an internal vein from between 6-7 to before 10; 3-4 somewhat approximate, 3 from angle of cell; 2 from outer ninth of cell, but well-separated from 3; basal fork of 1 obsolete. *Hindwings* nearly 1, costa rather straight, termen obliquely rounded: *neuration* 8 veins, all separate; 2-5 more remote than 5-7, cell obliquely receding from 5; 6-7 parallel. *Abdomen* moderate. *Legs*: hind tibiae haired above.

Allied to *Lamprosetia* Stn., and having very similar oral structure and *neuration*, a careful comparison of slides, however, makes evident several small but important differences, especially in the forewing—vein 11 originates at half the length of the cell in *Anchimacheta*, while in *Lamprosetia* this vein leaves the media within the basal third; the internal vein is from between 7-8 in *Lamprosetia*, but it is from between 6-7 in *Anchimacheta* and 3-4 are approximate, while 3-7 are remote and almost equidistant in *Lamprosetia*.

#### 1. *Anchimacheta iodes*, sp. n.

The description of *A. capnodes* Wlsm. (the type of the genus) would apply in all particulars to this species, with the following exceptions:—In size it is a little smaller, the hindwings are a little narrower, the mediocostal shade-patch is rather less diffused and rather farther removed from the preceding patch, but, above all other differences, it can be most easily separated by a strong tinge of light rust-brown which overspreads the base of the hindwings. *Exp. al.* 12 mm.

*Type* ♂ (66055); ♀ (66056) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66060-1) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Seven specimens.

There are five undoubted males of this species in the collection, and two females, taken at the same time and place, but the females differ in having shorter palpi and in the absence of the rust-brown shade at the base of the hindwings; their colouring is perhaps also a little more generally suffused—they cannot be determined with certainty as belonging to the same species.

## 2. *Anchimacheta capnodes*, sp. n.

*Antennae* stone-grey. *Palpi* stone-grey, the terminal joint and the upper half of the median greyish fuscous externally. *Head* pale stone-grey. *Thorax* stone-grey. *Forewings* pale stone-grey, mottled with greyish fuscous, of which there is a small spot at the base of the costa, followed by a costal patch reaching to one-fourth, and a transverse median shade, its inner edge somewhat sinuate and curved outward on the fold, its outer side diffused and diluted, influencing the colour of the rather mottled wing-surface to the apex and termen; a small costal patch at the commencement of the cilia is inverted at its lower extremity, with a blackish dot below it, and another, rather larger, in the same line above the tornus; a few greyish fuscous scales lie around the apex before the dull stone-grey cilia. *Exp. al.* 15 mm. *Hindwings* brownish grey; cilia brownish grey, with a pale line at their base inclining to ochreous. *Abdomen* greyish. *Legs* brownish cinereous, shaded before and behind the second pair of spurs with greyish fuscous.

*Type* ♂ (66051); ♀ (66052) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66053-4) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Four specimens.

## 3. *Anchimacheta tolmetes*, sp. n. (Tab. IX. fig. 27.)

*Antennae* brownish cinereous. *Palpi* brownish cinereous, shaded externally with brownish fuscous, almost to their apex. *Head* and *Thorax* brownish cinereous. *Forewings* brownish cinereous, with a strong patch of dark reddish fuscous suffusion near the base, diluted outward nearly to the middle of the costa, and having an elongate, stone-whitish, dorsal patch at its lower extremity, around which it is diluted to the flexus and to the middle of the dorsum, blending with the paler ground-colour outward, but reappearing in a small costal patch at the commencement of the costal cilia, below which are two blackish spots—one above the other, the lower and larger one, above the tornus, preceded and followed by some few stone-whitish scales; cilia brownish cinereous. *Exp. al.* 14 mm. *Hindwings* brownish grey, with a strong pale rust-brown suffusion at their base. *Abdomen* brownish cinereous. *Legs* cinereous.

*Type* ♂ (66050) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

This species agrees with *iodes* Wlsm. in having a strong pale rust-brown suffusion at the base of the hindwings, while it differs in the more general suffusion of the forewings which lack the pale intermediate bands between the darker markings, but are distinguished by the pale whitish dorsal patch and the suffused dark reddish fuscous patch at the basal third.

## HYPONOMEUTA Ltr.

= † *YPONOMEUTE* Ltr., = † *YPONOMEUTA* Ltr. († *HYPONOMETTA* Sdf.); = *HYPHANTES* Hb.  
= § *ERMINEA* Hw.; = *NYGMIA* Hb.

(*ὑπονομευτός*, ἡ, ὅν [*ὑπονομεύο*]=to undermine, to make mines.)

*Type*: *Tinea evonymella* L. (Ltr. 1802).

*HYPONOMEUTA* Ltr. (†Sdf.) = † *YPONOMEUTA* Ltr. [Préc. Gen. Ins. 146 no. 16 (1796) MN.]:  
HN. Crust-Ins. 3 417-8 (1802): 14 250-1 no. 453 sp. 1-5 (1805); Stgr-Rbl. Cat. Lp-Pal.  
2 132 no. 281 sp. 2353-66 (1901); Dyar Bull. US. Nat. Mus. 52 489 sp. 5477 (1902).

1. *Hyponomeuta eusoma*, sp. n.

*Antennae* pale slaty stone-colour. *Palpi* short, porrect; pale stone-colour, with a black spot externally at the base of the terminal joint. *Head* pale stone-colour. *Thorax* pale stone-colour, with black spots. *Forewings* pale stone-colour, with many roundish black spots; a series of six or seven below the basal half of the costa, and a series of six or seven below these, running nearly to the costal cilia; a group of five or six on the outer half of the cell, arranged in a triangle with its base outward, followed by one or two spots near the apex and two series, one of nine along the upper edge of the fold, and one of six below the fold; cilia pale stone-colour. *Exp. al.* 21 mm. *Hindwings* and cilia pale stone-grey. *Abdomen* stone-greyish, with dark brownish fuscous bands across the segments—broken into spots at the sides posteriorly, but joined together with a central line anteriorly, forming a somewhat conspicuous pattern. *Legs* pale stone-colour.

*Type* ♀ (66048) Wlsm. Coll. (*Godm-Salv. Coll.*) BM. [*PT.* (66049) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*). Two specimens.

## MIEZA Wkr.

= §*EUSTIXIS* Hb. (*nec* EUSTIXIA Hb.); = †*Mioza* Morris; = \**EUSTIXIA* (*nec* Hb.) Btlr.; = ENAEMIA Z.; = PSEUDOTALARA Druce.

Type 1: *Eustixis laeta* Geyer (= §*pupula* Hb.; = *igninix* Wkr.).

MIEZA Wkr. = §*EUSTIXIS* Hb. Ztr. Smlg. Exot. Schm. 3 24 [44, 46] sp. 245 Pf. [84] 489-90 (1825); Geyer Ztr. Smlg. Exot. Schm. 4 5 (1832). MIEZA Wkr. Cat. Lp. BM. 2 527-8 no. 107 sp. 1-3 (1854). †*Mioza* Morris Syn. Lp. N-Am. 1 253-4 sp. 1-3 (1862). MIEZA Morris Syn. Lp. N-Am. 1 p. xxv 306 (1862). *EUSTIXIS* Grt. & Rbnsn. List Lp. N-Am. p. vii (1868). \**EUSTIXIA* Btlr. Tr. Ent. Soc. Lond. 1877 358 (1877). *EUSTIXIS* Wlsm. Tr. Ent. Soc. Lond. 1881 250-1, 287 (1881). MIEZA Wlsm. & Drnt. Cat. East. & Austral. Lp-Het. Oxf. Mus. 2 562-3 sp. 3667 (1900); Dyar Can. Ent. 32 37, 39 (1900); Bull. US. Nat. Mus. 52 489-90 sp. 5478-80 (1902); Meyr. Pr. Linn. Soc. NSW. 32:1907 51, 88-90 no. 23 sp. 146-9 (1907); Barnes & McDngh. Contrib. NH. Lp. N-Am. 2 142-4 Pf. 9 9-13, 15 (1913); Busck Ins. Insc. Mens. 1 70-3 (1913); Meyr. Exot. Micr. 141-2 (1913).

Type 2: *Mieza subfervens* Wkr. (= *psammitis* Z.; Z. 1872).

ENAEMIA Z. Verh. ZB. Ges. Wien 22:1872 Abh. 562-4 sp. 1-2 Pf. 3 26-7 (1872): 25:1875 Abh. 344-5 sp. 1-2 (1875); Chmb. Bull. US. GG. Surv. 4 140 (1878); Meyr. Pr. Linn. Soc. NSW. 11:1886 (2 s. 1) 257-8 sp. 24 (1886); Riley, Smith's List Lep. Bor-Am. 97 sp. 5177-8 (1891).

Type 3: *Pseudotalara chrysippa* Druce (Druce 1885).

PSEUDOTALARA Druce Biol. C-Am. Ins. Lp-Het. 1 126 Pf. 12 22 (1885); Schaus Ann-Mag. NH. (8 s.) 9 57 (1912); Dyar Pr. US. Nat. Mus. 42 100 (1912).

1. *Mieza subfervens* Wkr. (Tab. IX. fig. 29.)

= †*subferreus* HS.; = *psammitis* Z.<sup>8</sup>

*Mieza subfervens* Wkr. Cat. Lp. BM. 2 528 sp. 2 (1854)<sup>1</sup>. *Mioza subfervens* Morris Syn. Lp. N-Am. 1 253 sp. 2 (1862)<sup>2</sup>. *Mieza subfervens* Morris Syn. Lp. N-Am. 1 306 sp. 2 (1862)<sup>3</sup>. *Mieza subferreus* HS. CB. ZM. Regensbg. 20 119-20 sp. 5 (1866)<sup>4</sup>. *Eustixis subfervens*

Grt. & Rbnsn. List Lp. N-Am. p. vii (1868)<sup>5</sup>. *Enaemia psammitis* Z. Verh. ZB. Ges. Wien 22:1872 562-3 sp. 1 Pf. 3·26 ♂ (1872)<sup>6</sup>. *Eustixis subfervens* Stretch Ill. Zyg-Bomb. N-Am. 168-9 Pf. 7·17 (1872)<sup>7</sup>; Grt. Bull. Buff. Soc. NH. 2 152 (1874)<sup>8</sup>. *Enaemia psammitis* Z. Verh. ZB. Ges. Wien 25:1875 345 sp. 1 (1875)<sup>9</sup>; Chmb. Bull. US. GG. Surv. 4 140 (1878)<sup>10</sup>; Riley, Smith's List Lp. Bor-Am. 97 sp. 5177 (1891)<sup>11</sup>. *Mieza subfervens* Dyar Can. Ent. 32 39 (1900)<sup>12</sup>. *Mieza psammitis* Dyar Can. Ent. 32 39 (1900)<sup>13</sup>. *Mieza subfervens* Dyar Bull. US. Nat. Mus. 52 489 sp. 5478 (1902)<sup>14</sup>. *Mieza psammitis* Dyar Bull. US. Nat. Mus. 52 490 sp. 5479 (1902)<sup>15</sup>; Pr. Ent. Soc. Wash. 5 127-8<sup>16</sup>, 298 (1903)<sup>17</sup>. *Mieza subfervens* Krft., Smith's Check-List Lp. Bor-Am. 107 sp. 6003 (1903)<sup>18</sup>. *Mieza psammitis* Krft., Smith's Check-List Lp. Bor-Am. 107 sp. 6004 (1903)<sup>19</sup>. *Mieza subfervens* Barnes & McDngh. Contrib. NH. Lp. N-Am. 2 142-3 Pf. 9·13 ♂ (1913)<sup>20</sup>. *Mieza psammitis* Busck Ins. Insc. Mens. 1 71-2 sp. 2 (1913)<sup>21</sup>. *Mieza subfervens* Busck Ins. Insc. Mens. 1 71-2 sp. 3 (1913)<sup>22</sup>.

Types ♂ ♀: *subfervens* Wkr. ♂ (1846:110) BM.; *psammitis* Z. (♂, 102220; ♀, 102221; PT. ♂, 102222=var.) Mus. Wlsm. (Zell. Coll.) BM.

Hab. AMERICA, N-C-I. United States<sup>1-22</sup>—SOUTHERN STATES<sup>8</sup>; TEXAS<sup>6-7, 14-17, 20</sup>, W.<sup>7</sup>: VICTORIA: Victoria, ⊕ *Bumelia lanuginosa* (E. A. Schwarz<sup>16</sup>; A. N. Caudell)<sup>17</sup>: KERR: Kerrville<sup>20</sup>. Central America—MEXICO: VERA CRUZ: Jalapa (W. Schaus, 5880 Wlsm. Det. 1908). West Indies<sup>4</sup>—CUBA<sup>4</sup>.

[It should be noted that both *subfervens* Wkr. and *laeta* Geyer (=§ *pupula* Hb.; =*igninix* Wkr.; =*crassivenella* Z.) feed on *Sapotaceae*:—*laeta* on *Sideroxylon tenax* and *subfervens* on *Bumelia lanuginosa*. Drnt.]

## 2. *Mieza chrysippa* Druce.

*Pseudotalara chrysippa* Druce Biol. C-Am. Ins. Lp-Het. 1 126 Pf. 12·22 (1885)<sup>1</sup>.

Type ♀ (1897:52) Godm-Salv. Coll. BM.

Hab. GUATEMALA<sup>1</sup>: QUICHÉ<sup>1</sup>: Quiché Mts., 7000-9000 ft.<sup>1</sup>, 31. VII – 5. VIII. 1880 (G. C. Champion).

## 3. *Mieza spatula* Busck.

*Mieza spatula* Busck Ins. Insc. Mens. 1 72 (1913)<sup>1</sup>.

Type ♂ (15804) US. Nat. Mus.

Hab. Central America—COSTA RICA<sup>1</sup>: Volcan de Poas<sup>1</sup>, 6000-7000 ft., 5. IV. 1908 (W. Schaus); V.<sup>1</sup>—PANAMA<sup>1</sup>: CANAL ZONE: Cabima, V. (A. Busck)<sup>1</sup>.

## 4. *Mieza citrina* Busck.

*Mieza citrina* Busck Ins. Insc. Mens. 1 72-3 (1913)<sup>1</sup>.

Type ♂ (15805) US. Nat. Mus.

Hab. COSTA RICA<sup>1</sup>: Juan Viñas, II. (W. Schaus)<sup>1</sup>.



5. **Mieza irrorata** Busck.*Mieza irrorata* Busck Ins. Insc. 1 73 (1913) <sup>1</sup>.

Type ♂ (15896) US. Nat. Mus.

Hab. COSTA RICA <sup>1</sup>: Juan Viñas, II. (*W. Schaus*) <sup>1</sup>.

[The four species following have been described as belonging to the genus *Pseudotalara* Druce, and included in the *Zygaenidae*. *Pseudotalara* Druce (Type: *chrysippa* Druce), although originally placed in the *Lithosiadae*, is a Hyponomeutid, agreeing in structure with the genus *Mieza* Wkr., to which genus species 6–9 must be referred provisionally, but it is quite possible that they may be *Zygaenidae* somewhat resembling *Pseudotalara* in appearance.—

Mr. Busck has since examined the Types of these species and refers them all to *Mieza* Wkr. Drnt.]

6. **Mieza pseudophile** Dyar.*Pseudotalara pseudophile* Dyar Pr. US. Nat. Mus. 42 100 (1912) <sup>1</sup>.

Type ♂ (13867) US. Nat. Mus.

Hab. MEXICO <sup>1</sup>: OAXACA <sup>1</sup>: Oaxaca (*Schaus Coll.*) <sup>1</sup>.7. **Mieza euthoracica** Schaus.*Pseudotalara euthoracica* Schaus Ann-Mag. NH. (8 s.) 9 57 (1912) <sup>1</sup>.Hab. COSTA RICA <sup>1</sup>: Sitio <sup>1</sup>.8. **Mieza lateralis** Dyar.*Pseudotalara lateralis* Dyar Pr. US. Nat. Mus. 42 100 (1912) <sup>1</sup>.

Type ♂ (13868) US. Nat. Mus.

Hab. MEXICO <sup>1</sup>: VERA CRUZ <sup>1</sup>: Misantla, XI. 1910 (*R. Müller*) <sup>1</sup>.9. **Mieza schenoxantha** Dyar.*Pseudotalara schenoxantha* Schaus Ann-Mag. NH. (8 s.) 9 57 (1912) <sup>1</sup>.Hab. COSTA RICA <sup>1</sup>: Mount Poas <sup>1</sup>.

## ATTEVA Wkr.

=§*POECILOPTERA* Clms.; =*AMBLOTHRIDIA* Wlgrn.; =*CORINEA* Wkr.; =*OETA* Grt.; =*SYNADIA* Wkr. (§*CARTHARA* Wkr.); =§*SCINTILLA* Gn.; =*SYBLIS* Gn.

Type 1: *Atteva niveigutta* Wkr. (Wkr. 1854; =\**fabriciella* Wlgrn., Wlgrn. 1861).

ATTEVA Wkr. Cat. Lp. BM. 2 526–7 no. 106 sp. 1 (1854). *AMBLOTHRIDIA* Wlgrn. Resa Eugen. 2 Zool-Ins. 385–6 sp. 76–7 Pf. 7·5 (1861). ATTEVA Berg An. Soc. Ci. Argent. 10 99–109 sp. 1–17 (1880); Wlsm. Pr. Z. Soc. Lond. 1897 112–3 no. 45 sp. 139–42 (1897); Dyar Bull. US. Nat. Mus. 52 490 sp. 54812 (1902); Meyr. Pr. Linn. Soc. NSW. 32 : 1907 51, 78–82 no. 18 sp. 108–21 (1907).

Type 2: *Deiopeia aurea* Fitch (= *compta* Clms.; Clms. 1860; Grt. 1865).

OETA Grt. = § *POECILOPTERA* Clms. Pr. Ac. Nat-Sc. Phil. 12 546-7 (1860). OETA Grt. Pr. Ent. Soc. Phil. 5: 1865 230-1 (1865).

[§ *Poeciloptera* Clms. is homonymous with *POECILOPTERA* Ltr. (1829) *Hem.*, etc.]

Type 3: *Phalaena Tinea fabriciella* Swdr. (= *niviguttella* Wkr.; Wkr. 1863).

CORINEA Wkr. Cat. Lp. BM. 28 542-3 no. 9 sp. 1-2 (1863).

Type 4: *Carthara flavivitta* Wkr. (Wkr. 1866).

SYNADIA Wkr. = § *CARTHARA* Wkr. Cat. Lp. BM. 35 1871-2 (1866). SYNADIA Wkr. Cat. Lp. BM. 35 1984 (1866).

[§ *Carthara* Wkr. is homonymous with *CARTHARA* Wkr. (1865) *Lep.*]

Type 5: *Tinea pustulella* F. (Gn. 1879).

§ *SCINTILLA* Gn. Ann. Soc. Ent. Fr. 48 (5 s. 9: 1879) 287-8 (1879).

[§ *Scintilla* Gn. is homonymous with *SCINTILLA* Desh. (1858) *Moll.*]

Type 6: *Oeta fulviguttata* Z. (= *glaucopidella* Gn.; Gn. 1879).

SYBLIS Gn. Ann. Soc. Ent. Fr. 48 (5 s. 9: 1879) 288-9 (1879).

### 1. *Atteva hysginiella* Wlgrn.

*Amblothridia hysginiella* Wlgn. Resa Eugen. 2 Zool-Ins. 386 sp. 77 (1861)<sup>1</sup>. *Atteva hysginiella*

Berg An. Soc. Ci. Argent. 10 104 sp. 5 (1880)<sup>2</sup>.

*Hab.* PANAMA<sup>1-2</sup>: IV<sup>1</sup>.

### 2. *Atteva gemmata* Grt.

= *fastuosa* Z.

*Oeta gemmata* Grt. Bull. Buff. Soc. NH. 1 93-4 (1873)<sup>1</sup>. *Oeta fastuosa* Z. Hor. Soc. Ent. Ross.

13 225-7 sp. 2 Pf. 3 68 (1877)<sup>2</sup>. *Oeta gemmata* (Grt.) Berg An. Soc. Ci. Argent. 10 101 (1880)<sup>3</sup>. *Atteva fastuosa* Berg An. Soc. Ci. Argent. 10 109 sp. 17 (1880)<sup>4</sup>. *Oeta fastuosa*

Wlsm. Pr. Z. Soc. Lond. 1891 533, 547 sp. 115 (1892)<sup>5</sup>. *Atteva gemmata* (Grt.) Wlsm. Pr.

Z. Soc. Lond. 1897 113 (1897)<sup>6</sup>. *Atteva fastuosa* Wlsm. Pr. Z. Soc. Lond. 1897 113 sp. 140 (1897)<sup>7</sup>.

*Types* ♂ ♀ : *gemmata* Grt. (Am. Ent. Soc.) Mus. Ac. Nat. Sc. Phil.; *fastuosa* Z. ♀ Mus. Stgr.

*Hab.* AMERICA, C-I. Central America—HONDURAS: BAY IS.: Ruatuan Id. (Gaumer). West Indies<sup>1-7</sup>—CUBA<sup>1-7</sup> (*F. Poey*)<sup>1</sup>: Santiago, II. 1902 (*W. Schaus*).

[See notes under *pustulella* F. on page 331.]

### 3. *Atteva ergatica*, sp. n.

*Antennae* leaden grey; basal joint white. *Palpi* white, tipped with fuscous, a black ring around the median joint.

*Head* barred alternately with black and yellowish white. *Thorax* golden orange; patagia yellowish white, with a black spot behind each and with two corresponding leaden blue spots at the posterior edge of the thorax; tegulae golden orange. *Forewings* golden orange, with dark leaden blue shining

bands and patches, each containing several yellowish white spots; the first, at the base, leaving a small spot of the orange ground-colour at the base of the costa, extends across the wing, with two costal, two median, and two dorsal spots—the two median and the first dorsal coalescing; the second band, before the middle, slightly attenuate toward each margin, and containing four pairs of opposite spots in two nearly parallel lines; scarcely beyond the middle is a short quadrate costal patch, containing two pairs of opposite spots, the lower pair sometimes coalescing and the patch becoming triangular and nearly touching the upper extremity of a large head-shaped dorsal patch, beyond the middle, the nose pointing outward—this contains eight or nine spots, seven or eight following the outline, the remaining spot central (sometimes two of the outer spots coalesce); before the apex is another quadrate costal patch, larger than the one preceding it, and containing seven or eight spots, sometimes broken and irregular, while beyond and below this, on the lower half of the termen, is a smaller patch containing a few more or less coalescent spots; cilia tawny leaden grey. *Exp. al.* 22–27 mm. *Hindwings* semi-transparent, tawny leaden grey, subiridescent between the more darkly marked veins, the apex and dorsum rather more thickly scaled, and therefore darker than the remainder of the wing; cilia bronzy. *Abdomen* fuscous; underside white. *Legs* purplish fuscous, with white spots at the ends of the tibiae and on the tarsi.

*Type* ♀ (66064, *Rio Sarstoon*) Mus. Wlsm. (*Godm-Salv. Coll.*); ♂ (1845:123, *Limas*) BM. [*PTT*, 66065, 66069) US. Nat. Mus.]

*Hab. Central America*—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*)—GUATEMALA: SACATEPEQUEZ: Capetillo, IV–V. 1879 (*G. C. Champion*)—BRITISH HONDURAS: Limas, nr. Belize, 1844–5 (*D. Dyson*); *Rio Sarstoon* (*Blancaneaux*)—NICARAGUA: Chontales (*E. Janson*). Ten specimens.

The underside of the thorax is spotted with yellowish white on a black ground, and, like its closely allied congeners, its colouring renders it a good imitation of some of the *Vespidæ*. It is nearly allied to *floridana* Nmgn. and *aurea* Fitch—indeed, it is intermediate between them; from the former it differs in the greater restriction of the golden orange ground-colour, and from the latter in the narrower and more distinctly separated bands and blotches, which leave the orange ground-colour to occupy a larger area. The larva of *floridana* is known to be quite distinct from that of *aurea* [*vide* Dyar Jr. NY. Ent. Soc. 5 48 (1897)], and although the several species are extremely similar they can be separated consistently—perhaps more easily by sight than by description.

#### 4. *Atteva aurea* Fitch.

= *compta* Clms.<sup>13</sup>; = †*aurera* Stretch; = \**punctella* (*nec* Stoll) Z.

*Deiopeia aurea* Fitch Tr. NY. State Agr. Soc. 16: 1856 486–7 sp. 214 (1856)<sup>1</sup>; Rp. Ins. NY. 3–5 168–9 sp. 214 (1859)<sup>2</sup>. *Poeciloptera compta* Clms. Pr. Ac. Nat-Sc. Phil. 12 547 (1860)<sup>3</sup>. *Deiopeia aurea* Morris Syn. Lp. N-Am. 251–2 sp. 2 (1862)<sup>4</sup>. *Poeciloptera compta* Morris Syn. Lp. N-Am. 312 sp. 1 (1862)<sup>5</sup>. *Deiopeia aurea* Pkrd. Pr. Ent. Soc. Phil. 3 106 (1864)<sup>6</sup>. *Poeciloptera compta* Grt. Pr. Ent. Soc. Phil. 4 319 (1865)<sup>7</sup>. *Oeta compta* Grt. Pr. Ent. Soc. Phil. 5 230–1 (1865)<sup>8</sup>. *Cydosia aurea* Grt-Rbnsn. List. Lp. N-Am. 1 p. vii (1868)<sup>9</sup>. *Oeta compta* Grt-Rbnsn. List Lp. N-Am. 1 p. vii (1868)<sup>10</sup>; Riley Rp. Ins. Mo. 1 151–3 Pf. 2·22–3 (1869)<sup>11</sup>; Z. Stett. Ent. Ztg. 32 178 (1871)<sup>12</sup>; Riley Tr. Ac. Sc. St-Louis 3 Jr. p. liii–iv (1873)<sup>13</sup>. *Oeta aurea* Stretch Ill. Zyg-Bomb. N-Am. 159–60, 240–2 (†*aurera*) Pf. 7·10

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(1873)<sup>14</sup>. *Oeta punctella* (p.) Z. Verh. ZB. Ges. Wien **23**: 1873 Abh. 228-30 (1873)<sup>15</sup>; Chmb. Bull. US. GG. Surv. **4** 159 (1878)<sup>16</sup>. *Atteva punctella* (p.) Berg An. Soc. Ci. Argent. **10** 100-2 sp. 1 (1880)<sup>17</sup>. *Oeta compta* Riley US. Ent. Com. (Dp. Intr.) Bull. **6** 13, 58 (1881)<sup>18</sup>; Pkrd. US. Ent. Com. (Dp. Intr.) Bull. **7** 132 (1881)<sup>19</sup>; (Dp. Agr.) Rep. **5** 669 (1890)<sup>20</sup>. *Oeta punctella* (p.) Wlsm. Pr. Z. Soc. Lond. **1891** 532, 547 sp. 113 (1892)<sup>21</sup>; (p.) Hdm. Stett. Ent. Ztg. **57** 10-11 sp. 85 (1896)<sup>22</sup>. *Atteva punctella* (p.) Wlsm. Pr. Z. Soc. Lond. **1897** 112-3 sp. 139 (1897)<sup>23</sup>. *Atteva aurea* Dyar Can. Ent. **32** 39 (1900)<sup>24</sup>; Bull. US. Nat. Mus. **52** 490 sp. 5481 (1902)<sup>25</sup>.

*Hab.* AMERICA, N-C. Canada (1908: 122 BM.). United States<sup>1-25</sup>—SOUTHERN STATES<sup>11, 14, 25</sup>—IOWA (1908: 122 BM.)—MISSOURI<sup>7-8, 11-15, 23</sup>: ⊕ *Ailanthus glandulosus*<sup>11-15, 18-24</sup>, VIII-IX<sup>11, 15, 23</sup>, excl. IX-XI<sup>11, 15, 23</sup>—NORTH CAROLINA: 1883 (H. K. Morrison)—GEORGIA<sup>1-2, 4, 6, 11, 14, 23</sup>—FLORIDA: 1883 (H. K. Morrison)—TEXAS<sup>3, 5, 14, 23</sup>. Central America—MEXICO: OAXACA: Salina Cruz (W. Schaus; Det. 5885)—BRITISH HONDURAS: Belize, 1844-5 (D. Dyson).

[See notes under *pustulella* F. on p. 331.]

##### 5. *Atteva microsticta*, sp. n. (Tab. IX. fig. 30.)

*Antennae* blackish at the base, fading outward, a white line along the upper side toward the apex. *Palpi* black, with some sprinkling of white scales toward the outer end of the median joint and on the base of the terminal. *Head* black, with some pale yellowish hair-scales on the crown and around the neck. *Thorax* blackish in the middle, edged with white posteriorly; tegulae reddish orange. *Forewings* dark greenish purple, spotted with yellowish white, and bearing eight reddish orange patches tending to divide the ground-colour into transverse spotted bands; the first is at the base of the costa; the second not quite touching the costa at one-fourth, and nearly confluent with a longer, upright, opposite dorsal patch; the third, just before the middle of the costa, produced downward on the cell, but not reaching the apex of a triangular opposite dorsal patch; the fourth, also costal, preceding a rather inwardly oblique erect tornal patch, and the fifth covering the apex—the other three being dorsal as above described; the spots on the intermediate dark bands are smaller and more numerous than in *pustulella* F., which like others of the genus it greatly resembles, but this character at once distinguishes it—a notable instance is that whereas on the lower two-thirds of the second band *pustulella* has four or five spots, one above an opposite pair with two sometimes confluent below, this species has seven spots arranged in a circle of six around a central one. *Exp. al.* 28 mm. *Hindwings* dark purplish grey. *Abdomen* fuscous, with white spots beneath. *Legs* purplish fuscous.

*Type* ♀ (6136 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* MEXICO: PUEBLA: Tehuacan, III. 1907 (R. Müller). Unique.

##### 6. *Atteva pustulella* F.

=§ *punctella* Stoll; =† *pastulella* F.; =† *pustulata* F.; = *subtilis* Hb.

§ *Phalaena Tinea punctella* Stoll, Crmr. Pap. Exot. **4** 164 Pf. 372·L (1781), 251, Essai Syst. Lp. 28 sp. 5 (1782)<sup>1</sup>; Goeze Ent. Beytr. (L. Syst. Nat. XII.) **3** (4) 170 sp. 299 (1783)<sup>2</sup>. *Tinea* † *pastulella* F. Mant. Ins. **2** 241 sp. 16 (1787)<sup>3</sup>. *Tinea pustulella* F. Ent. Syst. **3** (2) 292 sp. 20 (1794)<sup>4</sup>. *Lithosia pustulata* F. Sppl. Ent. Syst. 462 sp. 16 (1798)<sup>5</sup>. *Phalaena Tinea pustulella* Trtn. Syst. Nat. **3** 363 (1802)<sup>6</sup>. *Crameria subtilis* Hb. Verz. Schm. 168 sp. 1737 (1822)<sup>7</sup>. *Phycis punctella* Vrlrn. Cat. Syst. Crmr. 138, 274 (1837)<sup>8</sup>. *Cydosia punctella* Wkr. Cat. Lp. BM. **35** 1894 (1866)<sup>9</sup>. *Oeta punctella* Z. Stett. Ent. Ztg. **32** 178 (1871)<sup>10</sup>; (p.) Verh. ZB. Ges. Wien **23**: 1873 Abh. 228-30 (1873)<sup>11</sup>. *Scintilla pustulella* Gn. Ann.

Soc. Ent. Fr. 48 (5 s. 9:1879) 287-8 (1879)<sup>12</sup>. *Atteva punctella* (p.) Berg Ann. Soc. Ci. Argent. 10 100-2 sp. 1 (1880)<sup>13</sup>. *Oeta punctella* (p.) Wlsm. Pr. Z. Soc. Lond. 1891 532, 547 sp. 113 (1892)<sup>14</sup>; Hdm. Stett. Ent. Ztg. 57 10-11 sp. 85 (1896)<sup>15</sup>. *Atteva punctella* (p.) Wlsm. Pr. Z. Soc. Lond. 1897 112-3 sp. 139 (1897)<sup>16</sup>.

Type: *punctella* Stoll (*Suriname*), Coll. C. Stoll<sup>1</sup> [= *pustulella* F.; = *subtilis* Hb., nn.]

Hab. AMERICA, C-S-I. Central America—PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*): CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*): PEARL I<sup>DS</sup>: San Miguel (Isla del Rey), IV. 1883 (*G. C. Champion*). South America<sup>1-16</sup>—COLOMBIA<sup>10-11, 16</sup>—DUTCH GUIANA (SURINAME)<sup>1-8, 14, 16</sup>—FRENCH GUIANA<sup>12, 14, 16</sup>: Cayenne (*Bar*<sup>12, 16</sup>; *W. Schaus*); St. Laurent, Rio Maroni, 1-21. XI. 1906 (*E. Le Moul*)—BRAZIL<sup>9, 14, 16</sup>: PARA<sup>9</sup>: Pará, I. 1893 (*A. Schulz*); Santarem (*H. W. Bates*)<sup>9, 16</sup>: AMAZONS: Villa Nova (*H. W. Bates*)<sup>9, 16</sup>; Boaventura, Rio Jutahy, 24. I. 1875 (*J. W. H. Trail*); Marapata, 12. VII. (*J. W. H. Trail*): PARANA: Castro (*E. Dukinfield-Jones*)—ARGENTINA<sup>13-14, 16</sup>: BUENOS AIRES<sup>13, 16</sup>: La Plata (1908:122); Buenos Aires, ⊕ *Ailanthus glandulosa* (*C. Berg*)<sup>13-14, 16</sup>: LA RIOJA: La Rioja (*E. Giaconelli*). West Indies<sup>14-16</sup>—S<sup>T</sup>. CROIX, ⊕ *Castela erecta* (*Baron Eggers*)<sup>15-16</sup>—GUADELOUPE (1880:34)—TRINIDAD<sup>14, 16</sup> (*W. Schaus*).

[In 1897 the full synonymy of *pustulella* F. and allied forms was given under the heading of *Atteva punctella* Cram. & Stoll with the following note:—

“Grote seems to have been of the opinion that three species are represented in the above synonymy. (which if distinct should receive the following names:—*aurea* Fitch, United States; *gemmata* Grt., West Indies; *punctella* Cram., S. America); on the other hand, Riley and Berg considered that these names represent but a single species. I give the synonymy as I find it, withholding my own views until I have had the opportunity of studying more material” (Wlsm. Pr. Z. Soc. Lond. 1897 112-3 sp. 139).

One error occurs in this synonymy: *gemmata* Grote and the Cuban references should be eliminated, these pertain to the species recorded as *Atteva fastuosa* Z. (Wlsm. Pr. Z. Soc. Lond. 1897 113 sp. 141) which must be known as *Atteva gemmata* Grote (= *fastuosa* Z.)—at present this has only been taken in Cuba, and Ruatan Island, in the Gulf of Honduras. The references to *Atteva aurea* Fitch (= *compta* Clms.)—the form well-known in the United States, extending southward to British Honduras, and also recorded as from Canada—must also be eliminated as belonging to a species distinct from *Atteva pustulella* F. (= ♂ *punctella* Stoll; = *subtilis* Hb.). Fabricius proposed the neonym *Tinea pustulella* F. in lieu of ♂ *Phalaena Tinea punctella* Stoll (1781), evidently because this was absolutely homonymous with *Phalaena Tinea punctella* L. (1761—Fn. Suec. 368 sp. 1437), and Hübner probably proposed his neonym *Crameria subtilis* Hb. for the same reason.

*Atteva pustulella* F. (= ♂ *punctella* Stoll) ranges from Panama to Argentina, and occurs also in the West Indies; it is recorded as feeding on *Ailanthus glandulosa* Desv. and *Castela erecta* Turp., both belonging to the *Simarubeae*.



Walker (Cat. Lp. BM. 35 1894) records a specimen of *pustulella* F. (= *punctella* Wkr.) as "*c. Himalaya Mountains. Presented by the Entomological Club*"—the specimen still exists, and is registered 1844:12—the label is not decipherable with certainty, it seems to read "*J. B. Spence Hunil . . . Mountains*," but might signify "*Himilaya*"—this specimen belongs to the South American form, but the insect from Honduras wrongly identified as the "*Himalaya Mts.*" specimen (Wlsm. Pr. Z. Soc. Lond. 1891 532) is *ergatica* Wlsm., while specimen "*d—?*" (Wkr. Cat. Lp. BM. 35 1894) is *aurea* Fitch.—Drnt.]

### 7. *Atteva exquisita* Busck.

*Atteva exquisita* Busck Pr. Ent. Soc. Wash. 14:1912 86-7 (1912)<sup>1</sup>.

Type ♂ (14528) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: COAHUILA<sup>1</sup>: Mobano, VIII. (*R. Müller*)<sup>1</sup>.

## URODUS HS.

n. syn. = TRICHOSTIBAS Z.

Type 1: *Urodus monura* HS. (HS. 1854).

URODUS HS. Smlg. Aussereurop. Schm. 1 7 Anm. 11 no. 4 Pf. 43·219-20, expl. (1854), 58, 80 sp. 219-20 (1858); Wkr. Cat. Lp. BM. 7 1630 (1856); Btlr. Jr. Linn. Soc. Lond. Zool. 12 360 (1875); Druce Biol. C-Am. Ins. Lp-Het. 1 39 sp. 1-4 Pf. 6·11 (1884): 2 330 sp. 2<sup>a</sup> Pf. 70·7 (1896); Dgn. Het. Nouv. Am-S. 1 43 (1910).

Type 2: *Trichostibas fumosa* Z. (Z. 1863).

TRICHOSTIBAS Z. Stett. Ent. Ztg. 24 150-1 sp. 1 Pf. 2·10<sup>a-c</sup> (1863); F. & R. Reise Nov. Zool-Lp. 2 Pf. 139·27 (1875); Z. Hor. Soc. Ent. Ross. 13 227-34 sp. 1-6 Pf. 3·69-70 (1877); Wlsm. Pr. Z. Soc. Lond. 1891 533-4, 547 no. 60 sp. 118-21 (1892): 1897 114-16 no. 48 sp. 145-9 (1897); Dyar Can. Ent. 32 37, 39-40 (1900): Bull. US. Nat. Mus. 52 490 sp. 5483 (1902); Busck Pr. US. Nat. Mus. 38 527-30 Pl. 35 (1910); Strand Ann-Mag. NH. (8 s.) 7 237-41 sp. 1-4 (1911).

### 1. *Urodus monura* HS.

*Urodus monura* HS. Smlg. Aussereurop. Schm. 1 7 Anm. 11 no. 4 Pf. 43·219, expl. (1854), 58, 80 sp. 219 (1858)<sup>1</sup>; Wkr. Cat. Lp. BM. 7 1630 (1856)<sup>2</sup>; Druce Biol. C-Am. Ins. Lp-Het. 1 39 sp. 1 (1884)<sup>3</sup>.

*Hab.* AMERICA, C-S. Central America<sup>3</sup>—PANAMA<sup>3</sup>: CHIRIQUI<sup>3</sup>: Volcan de Chiriqui, 4000-6000 ft. (*G. C. Champion*)<sup>3</sup>. South America<sup>1-3</sup>—VENEZUELA (*Moritz*)<sup>1-3</sup>.

Butler [Jr. Linn. Soc. Lond. Zool. 12 360 (1875)] records this species from Para (*H. W. Bates*)—the specimens are now removed from the series and regarded as distinct from the Chiriqui species.—Drnt.

## 2. *Urodus imitata* Druce.

*Urodus imitata* Druce Biol. C-Am. Ins. Lp-Het. 1 39 sp. 4 (1884)<sup>1</sup>.

Type ♀ (1897: 52) (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA<sup>1</sup>: BAJA VERA PAZ<sup>1</sup>: San Gerónimo, 1879-80 (*G. C. Champion*)<sup>1</sup>.

## 3. *Urodus modesta* Druce.

*Urodus modesta* Druce Biol. C-Am. Ins. Lp-Het. 1 39 sp. 3 (1884)<sup>1</sup>.

Type ♂ (1897: 52) (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA<sup>1</sup>: QUEZALTENANGO<sup>1</sup>: Cerro Zunil, 4000-5000 ft., 1880 (*G. C. Champion*)<sup>1</sup>.

## 4. *Urodus chiquita* Busck.

*Trichostibas chiquita* Busck Pr. US. Nat. Mus. 38 529 (1910)<sup>1</sup>.

Type ♂ (13152) US. Nat. Mus. [*PTT.* (33855-6) Mus. Wlsm. BM.]

*Hab.* COSTA RICA<sup>1</sup>: Juan Viñas<sup>1</sup>; Tuis<sup>1</sup>; Florida (*W. Schaus*)<sup>1</sup>.

## 5. *Urodus auchmera*, sp. (Tab. IX. fig. 28.)

*Antennae* dark purplish grey. *Palpi* porrect, slender, the terminal joint as long as the median; dull brownish cinereous. *Head* and *Thorax* brownish cinereous. *Forewings* somewhat shining, brownish cinereous, with a slight vinous suffusion from the base, diminishing outwardly; cilia pale brownish cinereous. *Expl. al.* 19 mm. *Hindwings* dull greyish brown; cilia brownish cinereous. *Abdomen* and *Legs* greyish brown.

Type ♂ (66371, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (6146 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* Central America—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*)—PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). Three specimens.

## 6. *Urodus marantica*, sp. n.

*Antennae* purplish fuscous. *Palpi* fuscous. *Head* and *Thorax* yellowish grey, with a slight greenish gloss. *Forewings* dirty greyish ochreous, thickly overlaid with rich purplish blue scaling—especially toward the base, and in a broad band including the outer end of the cell, as well as along the costa; this purple scaling ceases in the neighbourhood of the termen, leaving that portion of the wing, from the costa to the tornus, of a dirty pale ochreous tint, which extends inward to the lower angle of the cell, but without defined boundaries, the colours blending gradually together; cilia dirty ochreous; underside with a naked space on either side of the radius, brownish ochreous tinged, the subcostal vein above it thickly fringed throughout with long hair-scales, laid flat downward. *Exp. al.* 24-26 mm. *Hindwings* semi-transparent, grey, with a greenish and purplish iridescence; cilia bronzy grey, slightly paler than the wings; underside with some thickening of scales along the subcostal vein, below the basal half of the costa. *Abdomen* fuscous; ♂ with the long anal claspers turned up at the end, their points directed inward. *Legs* fuscous, with a purplish gloss externally.

Type ♂ (66727, *V. de Chiriqui*); ♀ (66728, *Bugaba*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (6148 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* Central America—COSTA RICA: San José, X. (1906) (*W. Schaus*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*); Bugaba, 800-1500 ft., 1881-3 (*G. C. Champion*). Three specimens.

This species differs from *hephaestiella* Z. in its smaller size, in the richer purple gloss of the forewings, except in the pale terminal area, and in the absence of scale-mats on the hindwings of the ♂.

### 7. *Urodus hephaestiella* Z.

*Trichostibas hephaestiella* Z. Hor. Soc. Ent. Ross. 13 230-1 sp. 3 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

*Hab.* Central America<sup>1</sup>—COSTA RICA: Candelaria Mts. (*C. A. Underwood*)—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Volcan de Chiriqui (*H. Ribbe*)<sup>1</sup>.

The ♂ of this species (if two specimens from the Candelaria Mts. are rightly identified) shows a long, somewhat naked and indented patch on the underside of the forewings, on the basal half of the cell, reaching above it to the stiff hair-fringe on the subcostal vein, while, in the hindwings a small, elongate, reduplicate mat of scales interferes with their transparency between the cell and the middle of vein 1<sup>c</sup>, a similar, but less conspicuous mat occurring nearer to the margin at the outer side of vein 1<sup>b</sup>. The anal claspers of the ♂ are very long, curving upward, with inverted points.

### 8. *Urodus isthmiella* Busck.

*Trichostibas isthmiella* Busck Pr. US. Nat. Mus. 38 528-9 Pl. 35 (1910)<sup>1</sup>.

Type ♀ (13151) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: Gorgona, excl. 16. IV. (*E. A. M. Swaine*)<sup>1</sup>.

### 9. *Urodus costaricae* Busck.

*Trichostibas costaricae* Busck Pr. US. Nat. Mus. 38 529-30 (1910)<sup>1</sup>.

Type ♂ (13154) US. Nat. Mus. [*PT.* (33854) Mus. Wlsm. BM.]

*Hab.* COSTA RICA<sup>1</sup>: Juan Viñas<sup>1</sup>; Sixola River<sup>1</sup>; Tuis (*W. Schäus*)<sup>1</sup>.

### 10. *Urodus cumulata*, sp. n.

*Antennae* purplish fuscous. *Palpi* short, slender, slightly recurved; reddish brown. *Head* purplish fuscous. *Thorax* and tegulae dull stone-whitish, posteriorly shaded with reddish brown. *Forewings* narrow, elongate, with evenly rounded costa, obtuse apex, and obliquely convex termen; tawny reddish brown, blotched with dull stone-whitish—a small spot at the middle of the base; an irregular fasciate band at one-third, not quite reaching the costa, but widened on the dorsum, with indented margins, tapering inward above the fold; an elongate costal spot a little beyond the middle, with a group of irregular spots beneath it, of which the lower one (or more) tends to be confluent, toward the tornus, with a broad curved terminal patch; cilia brownish cinereous. *Exp. al.* 22-24 mm. *Hindwings* transparent, with iridescent green and purple reflections; cilia brownish cinereous. *Abdomen* smoky fuscous. *Legs* tawny reddish brown.

Type ♂ (66073); ♀ (66074) Jalapa, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (5891-6, 6138, 6145 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa, 4500 ft. (*M. Trujillo*); Orizaba (*W. Schaus*), XII. 1907 (*R. Müller*). Eighteen specimens.

11. *Urodus transversiguttata* Z.

*Trichostibas transverseguttata* Z. Hor. Soc. Ent. Ross. **13** 229–30 sp. 2 Pf. **3**·70 (1877)<sup>1</sup>.

Type ♀ Mus. Stgr.

*Hab.* Central America<sup>1</sup>—COSTA RICA: Cartago, XII. 1906 (*W. Schaus*); Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup> (*H. Ribbe*)<sup>1</sup>; Volcan de Chiriqui, 4000–6000 ft., XII. 1881 (*G. C. Champion*).

12. *Urodus distincta* Strand.

*Trichostibas distincta* Strand Ann-Mag. NH. (8 s.) **7** 241 sp. 4 (1911)<sup>1</sup>.

Type ♂ Zool. Mus. Berlin.

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI<sup>1</sup>: Volcan de Chiriqui, 1892 (*Trötsch*)<sup>1</sup>.

[The two species following do not belong to the genus *Urodus* HS. (*Trichostibas* Z.) and are probably *Zygaenidae*:—

**ruficollis** Druce (*Urodus*) Biol. C-Am. Ins. Lp-Het. **1** 39 sp. 2 Pf. **6**·11 (1884).

GUATEMALA: ALTA VERA PAZ: Senahu, XI. 1879 (*G. C. Champion*).

**dyraspes** Druce (*Urodus*) Biol. C-Am. Ins. Lp-Het. **2** 330 sp. 2<sup>a</sup> Pf. **70**·7 (1896). MEXICO:

GUERRERO: Amula, 6000 ft. (*H. H. Smith*). Drnt.]

## IMMA Wkr.

=TORTRICOMORPHA Fldr., etc.

Type 1: *Imma rugosalis* Wkr. (Wkr. 1858).

IMMA Wkr. Cat. Lp. BM. **16** 195 no. 38 sp. 1 (1858); Meyr. Tr. Ent. Soc. Lond. **1906** 169–204 sp. 1–95 (1906); Busck Ins. Insc. Mens. **1** 90–1 (1913).

1. *Imma nephallactis* Meyr.

*Imma nephallactis* Meyr. Tr. Ent. Soc. Lond. **1906** 201–2 sp. 86 (1906)<sup>1</sup>.

*Hab.* AMERICA, C-S. Central America—MEXICO: VERA CRUZ: Atoyac (*H. H. Smith*). South America<sup>1</sup>—VENEZUELA<sup>1</sup>: Ciudad Bolivar<sup>1</sup>; Aroa 1895 (*W. Schaus*).

2. *Imma cuneata* Meyr.

*Imma cuneata* Meyr. Tr. Ent. Soc. Lond. **1906** 202 sp. 87 (1906)<sup>1</sup>.

Type ♂ (Zell. Coll., Colombia); ♀ (1894:68, Brazil) BM.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). South America<sup>1</sup>—COLOMBIA (*Zell. Coll.*)<sup>1</sup>—BRAZIL (*Saunders Coll.*)<sup>1</sup>.

3. *Imma sciophanes*, sp. n.

*Antennae* dark fuscous. *Palpi* greyish white, the median and terminal joints both with a wider fuscous band. *Head* and *Thorax* greyish, suffused with fuscous. *Forewings* greyish white, largely suffused with dark chocolate, and, where not suffused, profusely sprinkled with the same; a dark chocolate

costal patch at one-fourth from the base is attenuated to the fold, below which are two smaller patches almost connected with it, and another at the base of the dorsum; scarcely beyond the middle is another chocolate costal patch connected below with others, forming an irregular straight transverse fascia on the outer edge of which, at the end of the cell, is a reduplicated blackish spot, almost lost in the dark chocolate suffusion of the outer third, which leaves only a small pale spot before coalescing with the outer fascia on and below the middle; a series of obscure dark marginal spots precedes the dark cilia, which are tipped with greyish white. *Exp. al.* 18 mm. *Hindwings* and cilia dark brownish fuscous, the latter tipped with greyish white. *Abdomen* (missing). *Legs* brownish fuscous, annulate with greyish white.

*Type* ♀ (67095) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Cubilguitz, 1050 ft., 1880 (G. C. Champion).  
Unique.

#### 4. *Imma cincta* Druce.

*Eustrotia cincta* Druce Biol. C-Am. Ins. Lp-Het. 2 495 sp. 17 Pf. 95 · 20 (1898)<sup>1</sup>. *Imma cincta* Meyr. Tr. Ent. Soc. Lond. 1906 203 sp. 90 (1906)<sup>2</sup>.

*Type* ♂ (1900:1) Godm-Salv. Coll. BM.

*Hab.* GUATEMALA<sup>1-2</sup>; ALTA VERA PAZ<sup>1</sup>: Senahu<sup>1</sup>, 17-23. XI. 1879 (G. C. Champion).

#### 5. *Imma ciniata* Druce.

*Thalpochares?* *ciniata* Druce Biol. C-Am. Ins. Lp-Het. 2 497 sp. 12 Pf. 95 · 23 (1898)<sup>1</sup>. *Imma ciniata* Meyr. Tr. Ent. Soc. Lond. 1906 204 sp. 91 (1906)<sup>2</sup>.

*Type* ♀ (1900:1) Godm-Salv. Coll. BM.

*Hab.* PANAMA<sup>1-2</sup>: CHIRIQUI<sup>1</sup>: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (G. C. Champion)<sup>1</sup>.

#### 6. *Imma boeta* Druce.

*Thalpochares?* *boeta* Druce Biol. C-Am. Ins. Lp-Het. 2 497 sp. 14 Pf. 95 · 24 (1898)<sup>1</sup>. *Imma boeta* Meyr. Tr. Ent. Soc. Lond. 1906 204 sp. 94 (1906)<sup>2</sup>.

*Type* ♀ (1900:1) Godm-Salv. Coll. BM.

*Hab.* PANAMA<sup>1-2</sup>: CHIRIQUI<sup>1</sup>: Volcan de Chiriqui, 3000 ft., 1881-2 (G. C. Champion)<sup>1</sup>: PANAMA: La Chorrera, 1. IV - 15. V. 1898 (C. H. Dolby-Tyler).

### Fam. 19. PHYLLORYCTERIDAE.

= PHYLLONORYCTERES Hb.

#### PHYLLORYCTER Hb.

†PHYLLONORYCTER Hb.; = LITHOCOLLETIS Hb.; = ELACHISTA Tr. (nec \*Z.).

Type 1: *Phalaena Tinea rayella* L. (†*rayella* L.; ‡*rayella* Hb. 200; Hb. 1806).

PHYLLORYCTER Hb. = †PHYLLONORYCTER Hb. Tent. 2 (1806). LITHOCOLLETIS Hb. Verz. Schm. 423 sp. 4117-20 (1826); Stgr-Rbl. Cat. Lp. Pal. 2 210-16 no. 424 sp. 4108-207 (1901).



† *LITHOCOLLETES* Dyar Bull. US. Nat. Mus. 52 549–57 sp. 6252–336 (1902). † *PHYLLORYCTER* Wlsm. Pr. Z. Soc. Lond. 1907 976–8 no. 46 sp. 90–5 Pf. 53·8 (1908). *LITHOCOLLETIS* Braun Tr. Am. Ent. Soc. 34 271–348, 355 Pf. 20·1–5, ·9–12, 21·1–24·13, ·23–4 (1908); Meyr. Gn. Ins. Lp. Wytsm. 128 3, 4–11 no. 1 sp. 1–207 Pf. ·9, ·11, ·17, ·25<sup>a-c</sup> (1912).

### 1. *Phyllorycter chalcobaphes*, sp. n.

*Antennae* bronzy. *Palpi* short, slender, divergent, drooping; pale bronzy. *Head* whitish, with bronzy scales on the crown. *Thorax* bronzy. *Forewings* bronzy, becoming more golden towards the apex; four white costal streaks beyond the middle, the first two outwardly oblique and slightly dark-margined on either side, the two outer ones shorter and straighter, faintly dark-margined on their inner edge; there is also one, very oblique, pale bronzy whitish streak, arising from the middle of the dorsum, which passes the apex of the first costal, nearly reaching the apex of the second, but not clearly defined; this is followed by a narrow, erect, white streak, dark-margined on either side, meeting the point of the third costal streak; at the apex is a rounded black dot in the cilia, followed by a fan-shaped shade-line and preceded on either side by curved, narrow, dark bronzy streaks, running through the cilia which are white behind them, a few black scales lying at their base on the termen above the tornus; dorsal cilia purplish bronzy. *Exp. al.* 8 mm. *Hindwings* bronzy brownish; cilia purplish bronzy. *Abdomen* bronzy brownish. *Legs* whitish, with faint darker tarsal spots.

*Type* ♀ (66734) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66735) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX (*H. H. Smith*). Four specimens.

### 2. *Phyllorycter pictus*, sp. n. (Tab. IX. fig. 31.)

*Antennae* pale yellowish. *Palpi* whitish. *Head* pale golden yellow; face white. *Thorax* silvery white, margined with pale golden in front. *Forewings* pale golden yellow, with three, oblique, silvery white streaks—the first at one-third, narrowly margined with dark bronzy brown on either side, these brown lines abruptly turned outward and terminated above the fold; the second, beyond the middle, wider, similarly dark-margined, the marginal lines also turned outward, but nearly meeting toward the apex; the third inconspicuous, internally dark-margined, and lost in the cilia below the apex; there is a dark bronzy dot at the extreme apex in the pale golden cilia, and on the costa, beyond the middle, are two short, oblique, bronzy streaklets running to the upper margin of the second dorsal streak and apparently forming the inner edges of obscure whitish costal streaks, scarcely paler than the golden ground-colour. *Exp. al.* 6 mm. *Hindwings* and cilia shining, pale greyish. *Abdomen* pale greyish. *Legs* yellowish white.

*Type* ♀ (66738) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, VIII. (*H. H. Smith*). Unique.

## CREMASTOBOMBYCIA Braun.

*Type*: *Lithocolletis solidaginis* Frey (Meyr. 1912).

CREMASTOBOMBYCIA Braun Tr. Am. Ent. Soc. 34 271–2, 349–54, 355 Pf. 20·6–7, ·13, 24·16–22 (1908); Meyr. Gn. Ins. Lp. Wytsm. 128 3, 11 no. 2 sp. 1–6 Pf. ·13 (1912).

### 1. *Cremastobombycia lantanella* Busck.

*Cremastobombycia lantanella* Busck Pr. Ent. Soc. Wash. 12 133–4 (1910)<sup>1</sup>; Meyr. Gn. Ins. Lp. 128 11 sp. 1 (1912)<sup>2</sup>.

*Type* ♂ (13150) US. Nat. Mus. [*PTT.* (33842–3) Mus. Wlsm. BM.]

*Hab.* AMERICA, C. Central America<sup>1-2</sup>—MEXICO (*A. Koebele*)<sup>1</sup>. HAWAIIA<sup>1-2</sup>—OAHU<sup>1</sup>: Honolulu, ⊕ *Lantana* (*O. H. Swezey*)<sup>1</sup>.

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## PENICA, gen. n.

(πηνίκη = a wig.)

Type: *Penica peritheta* Wlsm. (Tab. IX. fig. 32.)

*Antennae*  $\frac{4}{5}$ ; the basal joint with strong triangular eye-cap, spreading somewhat above the joint. *Labial Palpi* dependent, smooth, about the length of the head, terminal joint much shorter than median. *Maxillary Palpi* well-developed, dependent, not folded. *Head* smooth above, but with a strong rounded tuft of rough scales between the antennae; face smooth. *Thorax* smooth. *Forewings* elongate-lanceolate: *neuration* 11 veins (3 absent, 11 nearly obsolete); 6-7 stalked, enclosing the apex; 1 not furcate. *Hindwings* -1, lanceolate, acute: *neuration* 8 veins; 2-5 separate; 5-6 stalked (continued to base as media), cell closed. *Abdomen* somewhat flattened. *Legs*: front and middle tibiae smooth; hind tibiae with strong bristly hairs above.

A very distinct genus, belonging to the group of *Gracilaria* Hw., easily recognisable by the strong tufts between the antennae on the otherwise smooth head, and by the hairy hind tibiae.

1. *Penica peritheta*, sp. n. (Tab. IX. fig. 32.)

*Antennae*  $\frac{4}{5}$ ; cream-white. *Palpi* dependent, slender; cream-white. *Head* white, a projecting tuft of yellowish white scales, between the eyes, appears to be connected with a triangular brush of shining yellowish white scales, arising from the basal joint of the antennae and giving a very peculiar owl-like appearance to the front view of the face—the inner or underside of the antennal tuft is distinctly yellow. *Thorax* white, tegulae yellow. *Forewings* bright yellow-ochreous, the costa narrowly whitish to the commencement of the cilia, the dorsum shining white nearly to the end of the fold; the bright yellow colour becomes somewhat intensified toward the apex, shading gradually to the cilia. *Exp. al.* 9 mm. *Hindwings* pale greyish; cilia whitish, a slight golden lustre, tinged with grey, around the apex. *Abdomen* brownish white. *Legs* white.

Type ♀ (66739) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66743-4) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Six specimens.

## SPANIOPTILA Wlsm.

Type: *Spanioptila spinosa* Wlsm. (†*spinosum* Wlsm. 1897).

SPANIOPTILA Wlsm. Pr. Z. Soc. Lond. 1897 148 no. 91 sp. 228 (1897); Meyr. Gn. Ins. Lp. Wytsm. 128 3, 12-13 no. 5 sp. 1 (1912).

1. *Spanioptila eucnemis*, sp. n. (Tab. IX. fig. 33.)

*Antennae* 1; white, transversely barred with brownish grey above, some black scales at the end of the white basal joint. *Palpi* divergent, slender, drooping, at least as long as the head; white, with a slender black ring at the base of the median joint. *Head* and *Thorax* shining, white. *Forewings* very narrow; shining, white, dusted with black atoms tending to form a diffuse elongate patch, on the middle of the dorsum, and a smaller elongate spot, below the costa, at about one-fifth from the base; mixed with black dusting near the apex, are a few yellowish ochreous scales, tending to form a median line running to the apex; cilia tawny brownish grey, with iridescent reflections, a minute black streak running transversely through them at the extreme apex. *Exp. al.* 6 mm. *Hindwings* linear, slightly widened on the costa near the base; brownish grey; cilia bronzy brownish grey. *Abdomen* white, becoming brownish grey

posteriorly; snow-white beneath. *Legs* clothed above and at the joints with thorn-like hair-scales; white, with bands of subochreous scaling, thickly peppered with black around each joint, and at the extremity of the hind tarsi.

*Type* ♂ (66745) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

This species differs from *spinosa* Wlsm. in its smaller size and distinctly banded hind legs.

### ACROCERCOPS Wlgrn.

= CONOPOMORPHA Meyr.; = EUCOSMOPHORA Wlsm.; = DIALECTICA Wlsm.

*Type* 1: *Tinea brongiardella* F. (†*brongiardellus* Wlgrn. 1881).

ACROCERCOPS Wlgrn. Ent. Tidsk. 2 95 (1881); Wlsm. Pr. Z. Soc. Lond. 1907 979-81 no. 47 sp. 96-7 (1908); Meyr. Gen. Ins. Lp. Wytsm. 128 3, 14-19 no. 8 sp. 1-121 Pf. 7, 10, 20<sup>a-c</sup>, 28<sup>a-b</sup>, 32 (1912).

#### 1. *Acrocercops eclampsis*, sp. n., Drnt.

*Antennae* pale greyish. *Labial Palpi* strongly recurved, smooth; whitish. *Maxillary Palpi* porrect, whitish. *Head* shining, metallic aeneous. *Thorax* orange-ochreous, somewhat aeneous anteriorly. *Forewings* orange-ochreous, with a fuscous fascia within the basal fourth, wider on the costa than on the dorsum, broadly margined by silvery aeneous—in some lights becoming bright pale golden and obliterating the fuscous fascia, except on the costa where it is preceded by a silvery spot; a conspicuous, pretornal, triangular aeneous spot, becoming brilliant silvery at its apex, is preceded by a brilliant, silvery, elongate costal spot margined by blackish, and is followed, along the termen, by a patch of cupreous scaling reaching to the apex; cilia greyish, tinged with aeneous. *Exp. al.* 7.5 mm. *Hindwings* and cilia greyish fuscous. *Abdomen* greyish fuscous, pale aeneous beneath. *Legs* whitish; hind tibiae obscurely marked with pale fuscous, with a row of short setae above.

*Type* ♂ (401229) Stainton Coll. BM.

*Hab.* PANAMA: PANAMA, III. 1860 (*R. H. Stretch*). Unique.

Allied to *dives* Wlsm. (*Eucosmophora*; Pr. Z. Soc. Lond. 1897 149), but quite distinct, and easily recognised by the aeneous scaling not extending from the base along the dorsum to the apex as in that species.

#### 2. *Acrocercops gemmans*, sp. n.

*Antennae* brownish cinereous. *Palpi* whitish. *Head* shining, whitish. *Thorax* white above, the tegulae brownish. *Forewings* rich brownish ochreous, suffused with shining olivaceous grey from the base, this shade terminating in an attenuate point on the cell beyond the middle; the dorsum is white from base to tornus, but interrupted, about the middle, by an oblique band coming from the brownish ochreous ground-colour above it; about the end of the cell, a shining rosy metallic band crosses obliquely outward from the costa, and is abruptly angulated at one-half of the width of the wing, its lower extremity produced outward to a point—a blackish spot lies in the angle on its outer side; a bright brassy streaklet, inverted from the commencement of the costal cilia, overlaps, but does not meet a tooth-shaped metallic streak, tending obliquely outward from the end of the white dorsal band; at the apex is a black spot, with white cilia above and below, and followed by a line of steel-blue scales around the base of the ochreous apical cilia, which have a caudate appearance; dorsal cilia dark grey. *Exp. al.* 9 mm. *Hindwings* and

cilia dark purplish grey. *Abdomen* greyish. *Legs* whitish, with dark oblique lines on the outer side of the tarsi.

*Type* ♂ (66751) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66753, 66756, 66759) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Nine specimens.

### 3. *Acrocercops demotes*, sp. n. (Tab. IX. fig. 35.)

*Antennae* nearly as long as the forewings; brown, with very faint pale annulations. *Palpi* smooth, dependent; brownish ochreous. *Head* with projecting scales above; pale ochreous. *Thorax* brown, apparently paler on the middle (but somewhat greasy). *Forewings* with the costa straight, the apex depressed, slightly rounded, of even width throughout; dark brown, with a slight ferruginous tinge beyond the middle, the whole dorsal area below the fold very pale ochreous; two inconspicuous, outwardly oblique, pale ochreous costal streaklets, the first at one-third, the second a little beyond the middle; a reduplicated slender ferruginous line crossing the wing at the commencement of the costal cilia, together with a slender fuscous line running around the apex and termen, encloses an ocelloid apical spot, which is brown, centred with fuscous and margined with pale ochreous; the cilia beyond the line are pale ochreous, a brownish streak running through them across the apex, giving it an uncate appearance, dorsal cilia pale brownish cinereous. *Exp. al.* 9 mm. *Hindwings* narrow, elongate-acuminate, the costa somewhat bulged at the base; brownish grey; cilia pale brownish grey. *Abdomen* brownish grey, inclining to ferruginous at the base; anal tuft whitish ochreous; underside reddish ochreous, with slender, oblique, lateral brownish lines. *Hind Legs* whitish, tibiae brush-like above, shaded with fuscous externally at their outer ends, the tarsi with oblique pale brownish lateral bands.

*Type* ♂ (66767) Mus. Wlsm. (*Godm-Salv. Coll.*).

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

Very close to *gunniella* Busck, but differing in the slightly wider light dorsal area, in the more pronounced middle costal spot, and in the absence of a thin black line limiting the apical area.

### 4. *Acrocercops marmaritis*, sp. n. (Tab. IX. fig. 34.)

*Antennae* white, shading to fawn-grey outwardly. *Palpi* dependent, slender; white, with a brown spot externally at the end of the median joint. *Head* and *Thorax* white. *Forewings* pale fawn-brown, with white marginal and transverse streaks, the ground-colour around their edges being delicately peppered with brownish fuscous scales, a line of the same running through the middle of the white cilia around the apex; the white markings consist of the basal patch, extending along the dorsum, where it meets, at one-third, an outwardly oblique transverse band coming from the costa at about one-fourth, beyond it is a small outwardly oblique costal streak, an opposite dorsal streak lying a little beyond it; two narrow oblique fasciae occur beyond the middle, both slightly produced outward on the costa, but running obliquely outward to the dorsum from below it, the first rather more oblique than the second; a white spot at the apex precedes the dividing-line in the cilia, dorsal cilia brownish grey. *Exp. al.* 6.5 mm. *Hindwings* and cilia brownish grey. *Abdomen* brownish grey above. *Legs* whitish; the tibiae slightly bristly.

*Type* ♂ (66760) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### *Acrocercops* spp.

In addition to the species described above a single specimen (66766, MEXICO: GUERRERO: Omilteme, VII., *H. H. Smith*) is closely allied to 6375 *venustella* Clms.;

and another species, of which there are two specimens (66761-2, MEXICO : GUERRERO : Amula, 6000 ft., VIII-IX., *H. H. Smith*) is perhaps not distinct from 6370 *strigifinitella* Clms.—but better material is required before recording these species with certainty.

## GRACILARIA Hw.

=ORNIX Tr., Crt. (*nec* Dp.; *nec* Z.).

Type: *Tinea syringella* F. (= *anastomosis* Hw.; Crt. 1833).

GRACILARIA Hw. = † *GRACILLARIA* Hw. Lp. Br. 527-32 no. 31 sp. 1-21 (1828). GRACILARIA Z. Hor. Soc. Ent. Ross. 13 406-20 sp. 1-9 Pf. 6·142-50 (1877); Stgr-Rbl. Cat. Lp. Pal. 2 206-8 no. 420 sp. 4040-81 (1901); Wlsm. Pr. Z. Soc. Lond. 1897 152-3 no. 94 sp. 237-41 (1897); Dyar Bull. US. Nat. Mus. 52 557-61 sp. 6341-86 (1902); Meyr. Gn. Ins. Lp. Wytsm. 128 4, 25-30 no. 17 sp. 1-116 Pf. ·4, ·18, ·24<sup>a-c</sup>, ·31 (1912).

*Gracilaria* spp.

This genus is represented by species allied to 6352 *violacella* Clms. (66749, MEXICO : TABASCO : Teapa, III., *H. H. Smith*); 6354 *elongella* L. (66748, MEXICO : GUERRERO : Amula, 6000 ft., VIII., *H. H. Smith*); 6363 *rhoifoliella* Chmb. (66747, MEXICO : GUERRERO : Amula, 6000 ft., VIII., *H. H. Smith*); and 6367 *sassafrasella* Chmb. (66750, MEXICO : TABASCO : Teapa, III., *H. H. Smith*), but the single specimens of each are not in condition to justify these species being actually recorded.

## PARORNIX Splr.

=\*ORNIX (Tr.) Z., etc.

Type: *Ornix anglicella* Stn.

PARORNIX Splr. = \*ORNIX Tr. (p.) Schm. Eur. 9 (2) 194-222 no. 154 sp. 1-26 (1833); Z. Isis 32: 1839 210 no. 36 sp. 1-3 (1839); Wlsm. Pr. Z. Soc. Lond. 1897 147 no. 90 sp. 227 (1897); Stgr-Rbl. Cat. Lp. Pal. 2 209-10 no. 422 sp. 4086-4106 (1901); Dyar Bull. US. Nat. Mus. 52 561 sp. 6387-95 (1902); Dietz Tr. Am. Ent. Soc. 33 287-97 Pl. 4 (1907); Splr. Schm. Eur. 2 410-12 no. 9 sp. 1-23 tf. 410·161 Pf. 90·26-8 (1910). \*ORNIX Tr. (B. PARORNIX Splr.) Splr. Schm. Eur. 2 410-12 no. 154 B. sp. 5-22 Pf. 90·27 (1910); Meyr. Gn. Lp. Ins. Wytsm. 128 4, 22-4 no. 13 sp. 1-41 Pf. ·16, ·27<sup>a-c</sup> (1912).

[Treitschke proposed his genus *Ornix* for the reception of two series of species:—“A. Mit kleineren Palpen, einfachen Fühlern. Die Raupen leben minirend, in Blättern, und verwandeln sich unter fester, pergamentartiger Decke” (=sp. 1-14), and “B. Mit starken buchigen Palpen und Haarpinseln oder doch Verdickungen am Anfange der Fühler. Die Raupen sind Sackträgerinnen, und verwandeln sich in dieser Bekleidung” (sp. 15-26). Curtis [Br. Ent. 10 expl. Pl. 479 p. 2 (1833)] cited *stigmatella* F. (= *upupaepennella* Hb., Crt.) as the Type of *Ornix* Tr., sinking Treitschke's genus as synonymous with *Gracilaria* Hw. Duponchel [Ann. Soc. Ent. Fr. 7 148 (1838): HN. Lp. Fr. 11 25-6 (1838), 556-79 no. 31 sp. 1704-14 Pf. 310·1-13



(1840)] restricted "*Ornix* Tr." to Treitschke's section B, and cited as Type *vibicella* Hb. (= *vibicipennella* Tr., Dp.). Zeller (Isis 1839 210) adopted "*Ornix* Tr." for *meleagri-pennella* Hb., but this was *ultra vires* after the action of Curtis and of Duponchel—the genonym proposed by Spuler is therefore adopted in lieu of \**Ornix* Z., etc. Drnt.]

1. ***Parornix micrura***, sp. n. (Tab. X. fig. 1.)

*Antennae* whitish cinereous, with minute darker annulations. *Palpi* slender, smooth, drooping; whitish cinereous. *Head* rough; whitish cinereous. *Thorax* whitish cinereous, tegulae greyish fuscous. *Forewings* greyish fuscous, minutely speckled with darker fuscous scale-tips, the dorsal third being whitish throughout, especially toward the base; the darker scaling has a tendency to form short, outwardly oblique, dashes along the upper edge of the white dorsal area, a similar short dash occurring on the middle of the costa, and a broken line of similar scales running from the outer end of the cell toward the apex; in the apical cilia is a slender black streak, bent downward and forming a slight hook, and from it a blackish line curves round within the whitish terminal cilia; dorsal cilia brownish grey. *Exp. al.* 7 mm. *Hindwings* and cilia brownish grey. *Abdomen* tawny brownish grey; anal tuft whitish. *Legs* dirty whitish, the hind tibiae shaded with brownish grey.

*Type* ♀ (66746) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Unique.

TISCHERIA Z.

*Type*: *Tinea complanella* Hb. 428 (Z. 1839).

TISCHERIA Z. Isis 32:1839 219 no. 42 sp. 1 (1839); Linn. Ent. 2 Pf. 2:53-7 (1847): 3 250, 333-40 sp. 1-5 (1848); Wlsm. Pr. Z. Soc. Lond. 1897 145 no. 88. sp. 220-2 (1897); Stgr-Rbl. Cat. Lp. Pal. 2 216-7 no. 426 sp. 4209-16 (1901); Dyar Bull. US. Nat. Mus. 52 564-6 sp. 6431-50 (1902).

1. ***Tischeria elongata***, sp. n.

*Antennae* and *Palpi* pale ochreous. *Head* and *Thorax* ochreous; face paler. *Forewings* ochreous, the colour becoming more intense on the outer half; with a few scattered fuscous scales, forming an erect group on the dorsum at two-thirds, and somewhat clouding the apical area and the base of the pale ochreous cilia. *Exp. al.* 11 mm. *Hindwings*  $\frac{1}{2}$ , very pale, shining, yellowish grey; cilia very pale ochraceous. *Abdomen* brownish ochraceous. *Legs* pale yellowish ochraceous.

*Type* ♂ (66764) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66765) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (H. H. Smith). Two specimens.

As compared with 6435 *citrinipennella* Clms., the wings are longer and narrower, and are distinctly peppered with dark dusting, not only at the apex, but towards the base—in this it differs from Clemens' species.

PLUTELLA Schrank.

*Type*: *Cerostoma maculipennis* Crt. (= *\*xylostella* S-D.; Schrank 1802).

PLUTELLA Schrank Fn. Boica 2 (2) 169, 126 sp. 1854 (1802); Z. Hor. Soc. Ent. Ross. 13 252-3 sp. 1 (1877); Stgr-Rbl. Cat. Lp. Pal. 2 137 no. 292 sp. 2443-50 (1901); Dyar Bull. US. Nat. Mus. 52 492 sp. 5503-9 (1902).

1. *Plutella maculipennis* Crt.

=\**xylostella* S-D., etc. ; =*cruciferarum* Z. ; =etc. (vide Wlsm.<sup>6</sup>).

*Cerostoma maculipennis* Crt. Br. Ent. 9 expl. Pl. 420 p. 2 sp. 3 (1832)<sup>1</sup>. *Plutella cruciferarum* Wlsm. Pr. Z. Soc. Lond. 1897 117 sp. 153 (1897)<sup>2</sup>. *Plutella maculipennis* Wlsm. & Drnt. Ent. Mo. Mag. 33 173-5 (1897)<sup>3</sup>; Stgr-Rbl. Cat. Lp. Pal. 2 137 sp. 2447 (1901)<sup>4</sup>; Dyar Bull. US. Nat. Mus. 52 492 sp. 5503 (1902)<sup>5</sup>; Wlsm. Fn. Haw. 1 652-3, 751 sp. 330 (1907)<sup>6</sup>.

*Hab.* EUROPE, ASIA, AFRICA, AMERICA, N-C-S-I. Central America—PANAMA: CANAL ZONE: Tabernilla (*A. Busck*). West Indies<sup>2</sup>—BAHAMAS: Nassau, 12-14. VII. 1898 (*J. L. Bonhote*)—JAMAICA: ST. ANN: Runaway Bay, 24. II-11. III. 1905 (*Wlsm.*)—PORTORICO<sup>2</sup>.—South America—BRAZIL: RIO DE JANEIRO: Petropolis, 1881 (*H. Doer*)—ARGENTINA: TUCUMAN: Las Vasquez, 445 m., XII. 1912 (*V. Dinelly*). AUSTRALIA. NEW ZEALAND. OCEANIA. HAWAIIA. "Probably wherever man eats cabbages" (*Stn.*)<sup>6</sup>.

## ACROLEPIA Crt.

=*ARGIOPE* Chmb.

Type: *Acrolepia autumnitella* Crt. (Crt. 1838).

ACROLEPIA Crt. Br. Ent. 15 expl. Pl. 679 p. 1-2 sp. 1-2 (1838); Stgr-Rbl. Cat. Lp. Pal. 2 232-3 no. 446 sp. 4474-89 (1901); Dyar Bull. US. Nat. Mus. 52 568 sp. 6471 (1902); Wlsm. Fn. Haw. 1 726-7, 754 no. 58 sp. 435 (1907).

1. *Acrolepia tharsalea*, sp. n.

*Antennae* slightly biserrate; delicately annulate with white and greyish fuscous. *Palpi* olive-grey, the median joint thickly tufted beneath, the terminal joint also somewhat roughly clothed. *Head* rough; pale olive-grey. *Thorax* olive-grey. *Forewings* olive-grey, with a greenish tinge, slightly speckled with white and fuscous, some groups of fuscous speckling along the costa—not occurring on the outer third, except close to the apex, where they are accompanied by whitish scales; a conspicuous fuscous spot on the middle of the termen is followed by white scales running through the cilia; the basal half of the dorsum contains three or four white upright streaks, narrowly margined with fuscous, the one farthest from the base wider than the others and tending obliquely outward; beyond the end of the cell is a transverse curved series of fuscous dots accompanied by white scales; cilia shining, olivaceous, with some brownish shade-lines running through them. *Exp. al.* 16 mm. *Hindwings* shining, pale brownish grey; cilia with a slight ochreous tinge. *Abdomen* olivaceous grey. *Hind Legs* pale olive-grey, with whitish tarsal annulations.

Type ♀ (66732) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66733) US. Nat. Mus.]

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*). Two specimens.

2. *Acrolepia incertella* Chmb.

=*dorsimaculella* Chmb.

*Heribeia*? *incertella* Chmb. Can. Ent. 4 44 (1872)<sup>1</sup>. *Argiope dorsimaculella* Chmb. Can. Ent. 5 13, 174 (1873)<sup>2</sup>; Bull. US. GG. Surv. 4 130 (1878)<sup>3</sup>. *Acrolepia dorsimaculella* Wlsm. Tr. Am.

Ent. Soc. 10 172-3 (1882)<sup>4</sup>. *Acrolepia incertella* Dyar Bull. US. Nat. Mus. 52 568 sp. 5471 (1902)<sup>5</sup>.

*Hab.* AMERICA, N-C. Canada—BRITISH COLUMBIA: Agassiz, ⊕ Lily bulbs (*J. Fletcher*). United States<sup>1-5</sup>—KENTUCKY (*Chmb.*)<sup>1-5</sup>—NORTH CAROLINA, 1883 (*H. K. Morrison*). Central America—MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*).

## Fam. 20. TINEIDAE.

### IDIOGLOSSA Wlsm.

=§*METAMORPHA* (Stn. MS.) Frey; =*IDIOSTOMA* Wlsm. (nn.).

Type 1: *Metamorpha miraculosa* Frey & Boll (Frey 1878).

§*METAMORPHA* Frey Stett. Ent. Ztg. 39 277-9 sp. 44 (1878). *IDIOSTOMA* Wlsm. (p.) Tr. Am. Ent. Soc. 10 199-200 (1882). §*METAMORPHA* Wlsm. & Mrtf. Can. Ent. 15 139 (1883). *IDIOSTOMA* Wlsm. Can. Ent. 15 239 (1883); Riley, Smith's List Lp. Bor-Am. 107 sp. 5778 (1891). *IDIOGLOSSA* Dyar Bull. US. Nat. Mus. 52 539 sp. 6119 (1902); Krft., Smith's Check-List Lp. Bor-Am. 117 sp. 6657 (1903).  
[§*Metamorpha* (Stn.) Frey is homonymous with *METAMORPHA* Hb. (1818) *Lp.*, and Wkr. (1862) *Hym.*]

Type 2: *Idioglossa bigemma* Wlsm. (Wlsm. 1881).

*IDIOGLOSSA* Wlsm. Tr. Ent. Soc. Lond. 1881 273-4 Pf. 13 · 42 (1881). *IDIOSTOMA* (nn.) Wlsm. Tr. Am. Ent. 10 199-200 (1882). §*METAMORPHA* Wlsm. & Mrtf. Can. Ent. 15 139 (1883). *IDIOSTOMA* Wlsm. Can. Ent. 15 239 (1883).

[In the event of *Idioglossa* (§*Metamorpha*) *miraculosa* F. & B. and *Idioglossa bigemma* Wlsm. being found to be generically distinct, the question would naturally arise as to the application of *Idiostoma* Wlsm. It should be noted, that although correction in the generic description of the South African Type of *Idioglossa bigemma* Wlsm. was made from the Texan Type of *Idiostoma americella* Wlsm. (= *miraculosa* F. & B.), the observation that "the original generic description must be amended in this particular, and the name, which is misleading, must be changed" proves clearly that the neonym *Idiostoma* Wlsm. (= *Idioglossa* Wlsm., olim, Type *bigemma* Wlsm.) was merely a suggested orthographical emendation—the two names are absolute synonyms with the common Type *bigemma* Wlsm. Drnt.]

#### 1. *Idioglossa miraculosa* Frey & Boll.

=*americella* Wlsm.<sup>3</sup>

*Metamorpha miraculosa* Frey & Boll Stett. Ent. Ztg. 39 278-9 sp. 44 (1878)<sup>1</sup>. *Idiostoma americella* Wlsm. Tr. Am. Ent. Soc. 10 199-200 (1882)<sup>2</sup>. *Metamorpha miraculosa* Wlsm. & Mrtf. Can. Ent. 15 139 (1883)<sup>3</sup>. *Idiostoma miraculosa* Riley, Smith's List Lp. Bor-Am. 107

sp. 5778 (1891)<sup>4</sup>. *Idioglossa miraculosa* Dyar Bull. US. Nat. Mus. 52 539 sp. 6119 (1902)<sup>5</sup>; Krft., Smith's Check-List Lp. Bor-Am. 117 sp. 6657 (1903)<sup>6</sup>.

*Types* ♀ ♀: *miraculosa* Frey & Boll, ♀ (32012) Mus. Wlsm. (*Frey Coll.*) BM.; *americella* Wlsm. ♀ (5397) Mus. Wlsm. BM.

*Hab.* AMERICA, N-C-I. United States<sup>1-6</sup>—TEXAS<sup>1-6</sup>: DALLAS<sup>1-6</sup>: Dallas, ⊕ *Panicum clandestinum*, excl. IX. (*J. Boll*)<sup>1</sup>. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). West Indies—JAMAICA: ST. ANN: Moneague, 11. I. 1905 (*Wlsm.*); Runaway Bay, 20. III. 1905 (*Wlsm.*).

## BUCCULATRIX Z.

Type 1: *Elachista boyerella* Dp. (= *albedinella* Z.).

*LYONETIA* Hb. (A. BUCCULATRIX Z.) Z. Isis 32:1839 214-16 no. 40 A. sp. 1-16 (1839). BUCCULATRIX Z. Linn. Ent. 3 286-301, 344 sp. 1-9 (1848): 2 Pf. 2·44-7 (1847). BUCCULATRIX Z. (A. BUCCULATRIX Z.) Z. Linn. Ent. 3 287-95, 344 sp. 1-5 (1848): 2 Pf. 2·44-6 (1847). BUCCULATRIX Wlsm. Pr. Z. Soc. Lond. 1897 144 no. 87 sp. 218-9 (1897): 1907 1012-3 no. 72 sp. 147-9 Pf. 53·9-10 (1908); Stgr-Rbl. Cat. Lp. Pal. 2 218-20 no. 431 sp. 4238-75 (1901); Dyar Bull. US. Nat. Mus. 52 548-9 sp. 6232-51 (1902).

Type 2: *Lyonetia* (*Bucculatrix*) *nigricomella* Z.

BUCCULATRIX Z. (B. CEROCLASTIS Z.) Z. Linn. Ent. 3 286, 295-301, 344 sp. 6-9 (1848): 2 Pf. 2·47 (1847).

1. *Bucculatrix subnitens*, sp. n. (Tab. X. fig. 2.)

*Antennae* whitish ochreous, annulate with pale brownish. *Head* ferruginous; face and eye-caps whitish ochreous. *Thorax* very pale ochreous, with a silvery white spot above. *Forewings* very pale ochreous at the base, shading to reddish brown beyond; a large patch of very dark brown scales, commencing at the middle of the dorsum, extends over the outer half of the fold, and is terminated posteriorly by a rather obscure silvery white dorsal spot, two similar spots, both a little oblique, occurring on the costa before and behind it; some very dark brown scales are also visible in the brownish grey cilia above and below the apex. *Exp. al.* 5 mm. *Hindwings* and cilia dark tawny brown. *Abdomen* dark brownish grey, the tarsi faintly spotted.

*Type* ♂ (66768) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

2. *Bucculatrix stictopus*, sp. n. (Tab. X. fig. 3.)

*Antennae* white, slightly tinged with ochreous along the base. *Head*, eye-caps, and *Thorax* white. *Forewings* white, slightly streaked with ochreous on the middle of the fold, with a short oblique ochreous streak on the middle of the costa, followed by a longer and more diffused streak a little beyond it, the apical portion also suffused with ochreous; a fuscous spot lies near the end of the fold, containing some slightly raised scales, and is followed by a sprinkling of ochreous scales; a short fuscous streak beyond the end of the cell points toward the apex, where two curved lines of fuscous scales run through the pale ochreous cilia—cilia about the tornus whitish. *Exp. al.* 6 mm. *Hindwings* very pale grey; cilia pale whitish ochreous. *Abdomen* silvery whitish. *Legs* hairy; whitish ochreous, the tarsal joints distinctly dotted with black.

*Type* ♂ (66769) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

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## PHILONOME Chmb.

=† *PHILLONOME* Chmb.Type: *Philonome clemensella* Chmb. (Chmb. 1874).

*PHILONOME* Chmb. Can. Ent. 6 96-7 (1874). † *PHILLONOME* Chmb. Jr. Cin. Soc. NH. 2·196, 199 no. 57 tf. 204·57 (1880). *PHILONOME* Dyar Bull. US. Nat. Mus. 52 563 sp. 6409 (1902).

1. *Philonome cuprescens*, sp. n.

*Antennae* aeneous, delicately annulate with brown. *Head* ferruginous; face pale, shining, silvery. *Thorax* dark cupreous, with a shining silvery line crossing it anteriorly and bent back over the tegulae on either side, whence it is continued in a narrow streak, gradually attenuated, nearly to the middle of the wing. *Forewings* bright shining ferruginous, speckled beyond the middle with dark cupreous scales; in addition to the silvery basal streak, a small brassy dorsal streak, arising before the middle, points obliquely outward toward the base of an also outwardly oblique costal streak of the same colour, opposite to which is a small silvery dorsal spot; the long cilia, which give the termen a widened appearance, are much ornamented—a ferruginous projection runs through them at the apex, dark-margined on either side, above which a silvery patch is cut by a dark triangular spot; below the apex a slender dark line bounds the ferruginous base of the cilia, beyond which they are tawny cinereous, another curved dark scale-line dividing them again before their extremities. *Exp. al.* 6-7 mm. *Hindwings* cupreous; cilia rich tawny. *Abdomen* dark greyish. *Legs* pale cinereous, the tibiae with long hairs above.

Type ♂ (66776) Mus. Wlsm. (*Godm-Salv. Coll.*). BM. [PTT. (66778-9) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). Five specimens.

This species differs from 6409 *clemensella* Chmb. in its much darker colouring and in its annulate antennae.

## COMODICA Meyr.

Type: *Comodica tetracercella* Meyr. (Meyr. 1880).

*COMODICA* Meyr. Pr. Linn. Soc. NSW. 5 252, 254-6 (1880)<sup>1</sup>: 17 (2 s. 7:1892) 480, 561-2 no. 24 sp. 125-8 (1893)<sup>2</sup>.

[*Comodica* Meyr. and *Ereunetis* Meyr. agree in the absence of one of the tornal veins in the forewings (apparently 3 obsolete), but *Ereunetis* has FW: 7-8 stalked, while these veins are separate in *Comodica*—*Comodica* was originally described as having HW: 5-6 separate, but this was subsequently corrected by Meyrick<sup>2</sup> to HW: 5-6 stalked. *Erechthias* Meyr. [Pr. Linn. Soc. NSW. 5 252, 261-71 (1880)] is now restricted to the New Zealand species with FW: 12 veins, all separate [*vide* Meyr. Pr. Linn. Soc. NSW. 17 (2 s. 7) 563 (1893)]—*stilbella* Dbld. (*Argyrosetia* Dbld.; *Argyresthia* Wkr.) should be regarded as the Type. Drnt.]

1. *Comodica lanceolata* Wlsm.

*Ereunetis lanceolata* Wlsm. Pr. Z. Soc. Lond. 1897 158 sp. 250 (1897)<sup>1</sup>.

Type ♂ (7172, *St. Thomas*) Mus. Wlsm. BM.

*Hab.* AMERICA, C-I-S. Central America—MEXICO: TABASCO: Teapa, II. (*H. H.*



*Smith*)—PANAMA: PANAMA, III. 1860 (*R. H. Stretch: Stn. Coll.*).—West Indies<sup>1</sup>—CUBA: Baracoa, IX. 1902 (*A. Busck*)—JAMAICA<sup>1</sup>: ST. ANDREW: Constant Spring, 21. XII – 6. I. 1905 (*Wlsm.*); MANCHESTER<sup>1</sup>: Mandeville, 1950 ft., X. 1892 (*T. D. A. Cockerell*)<sup>1</sup>: ST. ANN: Moneague, 15. I. 1905 (*Wlsm.*); Runaway Bay, 15. II., 5–24. IV. 1905 (*Wlsm.*)—ST. THOMAS, 7–30. IV. 1894 (*F. Gudmann; W. von Hedemann*)<sup>1</sup>. South America<sup>1</sup>—BRAZIL<sup>1</sup>: PARA<sup>1</sup>: Pará, IV., 20–6. VII., 1. IX – 15. XII. 1893 (*A. Schulz*)<sup>1</sup>.

[Closely allied to *Comodica zebrina* Btlr. (*Ereunetis*: *Wlsm. Fn. Haw.* 1 715–6, 753 sp. 418 Pf. 25·16 (1907)—the Hawaiian specimens are not in good condition, and *lanceolata* *Wlsm.* is probably not distinct. Drnt.]

## 2. *Comodica ordinata*, sp. n. (Tab. X. fig. 4.)

*Antennae* pale cinereous, annulate with brownish fuscous. *Palpi* projecting scarcely the length of the head beyond it, thickly clothed with rough scales to the extreme apex; pale cinereous, shaded with brownish fuscous externally, the median joint with projecting bristles on the outer side. *Head* roughly clothed; pale cinereous. *Thorax* pale cinereous, shaded with fuscous. *Forewings* pale cinereous, much shaded with brownish fuscous, which is more intense along the fold, nearly to its outer end and thence to the lower angle of the cell, than on the wing-surface; into this plical shade are merged the lower extremities of three somewhat less intense costal shades—one at, one before, and one beyond the middle, the extreme apex is also darkly shaded; the pale cinereous cilia, which are somewhat turned back at the apex, are also somewhat mottled with fuscous. *Exp. al.* 11 mm. *Hindwings* and cilia pale brownish grey. *Abdomen* brownish. *Legs* pale brownish grey.

*Type* ♂ (66775) Mus. *Wlsm.* (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

## EREUNETIS Meyr.

*Type*: *Ereunetis iuloptera* Meyr. (*Wlsm.* 1907).

EREUNETIS Meyr. Pr. Linn. Soc. NSW. 5 252, 258–61 (1880): Tr. NZ. Inst. 20 92–3 (1888): Pr. Linn. Soc. NSW. 17 (2 s. 7: 1892) 480, 562–5 no. 25 sp. 129–36 (1893); *Wlsm. Fn. Haw.* 1 714–17, 737, 753 no. 53 sp. 417–9 Pf. 25·15–17 (1907); Swezey Rp. Exp. Stn. Hawaii. Div. Ent. Bull. 6 7–15 Pl. 1–2 (1909); Meyr. Tr. Linn. Soc. Lond. (2 s. Z.) 14 300–1 sp. 102–4 (1911).

## 1. *Ereunetis minuscula* *Wlsm.*

*Ereunetis minuscula* *Wlsm.* Pr. Z. Soc. Lond. 1897 155–6 sp. 246 (1897)<sup>1</sup>: *Fn. Haw.* 1 716, 737, 753 sp. 419 Pf. 25·17 (1907)<sup>2</sup>; Swezey Rp. Exp. Stn. Hawaii. Div. Ent. Bull. 6 7, 12–13 Pf. 2·7–9 (1909)<sup>3</sup>.

*Type* ♂ (7084); ♀ (7085) *St. Thomas*, Mus. *Wlsm.* BM.

*Hab.* AMERICA, C-I-S. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). West Indies<sup>1–3</sup>—CUBA: Baracoa, VIII–IX. 1902 (*A. Busck*); JAMAICA<sup>1–2</sup>: ST. ANN: Moneague, 9–13. II. 1905 (*Wlsm.*); Runaway Bay, ⊕ *Typha domingensis*, 26. II., excl. 15–19. III. 1905 (*Wlsm.*), 21. III – 1. IV. 1905 (*Wlsm.*): T. ANDREW<sup>1–2</sup>:

Kingston, 26. VII. 1891 (*T. D. A. Cockerell*)<sup>1-2</sup>—ST. CROIX, 22-28. IV. 1894 (*F. Gudmann*; *W. von Hedemann*)<sup>1-2</sup>—ST. THOMAS, 7. III - 22. IV. 1894 (*F. Gudmann*; *W. v. Hedemann*)<sup>1-2</sup>—GRENADA<sup>1-2</sup>: Balthazar, 250 ft., 30. IV. (*H. H. Smith*)<sup>1-2</sup>—BARBADOS, ⊕ preying on *Diaspis lanatus*, excl. 1. V. 1894 (*C. V. Riley*). [South America?—COLOMBIA? (*Baron von Nolcken*)<sup>1-2</sup>.] HAWAIIA<sup>2-3</sup>—⊕ in introduced seeds, *Acacia*, etc., etc. (*R. C. L. Perkins*)<sup>2</sup>; ⊕ on dead leaves of palm, banana, pandanus, etc., in dry and decaying pods of various legumes, tamarind, *Cassia*, etc., in decaying stems of woody plants, in dead bracts at base of pineapples, on lantana bushes infested by *Orthezia insignis*, etc. (*O. H. Swezey*)<sup>3</sup>—OAHU<sup>2</sup>: Waianae Mts., IV. 1892 (*R. C. L. Perkins*)<sup>2</sup>—HAWAII<sup>2</sup>: KONA<sup>2</sup>: Kaawaloa, 1500 ft., VI., IX. 1892 (*R. C. L. Perkins*)<sup>2</sup>.

## LEUCOPTERA Hb.

= *CEMIOSTOMA* Z.

Type: *Tinea spartifoliella* Hb. 335 (Meyr. 1895).

LEUCOPTERA Hb. Verz. Schm. 426 sp. 4149-51 (1826). *CEMIOSTOMA* Z. Linn. Ent. 3 250, 272-9, 344 sp. 1-3 (1848): 2 Pf. 2 35-9 (1847)—Type: *spartifoliella* Hb. LEUCOPTERA Meyr. HB. Br. Lp. 709, 754-6 no. 11 sp. 1-7 tf. 754 (1895); Wlsm. Pr. Z. Soc. Lond. 1897 141-2 no. 83 sp. 214 (1897). *CEMIOSTOMA* Stgr-Rbl. Cat. Lp. Pal. 2 218 no. 430 sp. 4227-37 (1901). LEUCOPTERA Dyar Bull. US. Nat. Mus. 52 562 sp. 6405-6 (1902).

1. *Leucoptera coffeella* Guér-Mén. & Prrott.

= "*esp. de noctuella*" Mdnr.

*Elachista coffella* Guér-Mén. & Prrott. Mém. Ins. Cafiers Antill. 1-32 Pl. 1-2 (1842)<sup>1</sup>: Rev. Zool. 5: 1842 126-7 (1842)<sup>2</sup>: Ann. Soc. Ent. Fr. 11 Bull. p. ii (1842)<sup>3</sup>. *Bucculatrix* sp. Stn. Ent. Wk. Int. 4 70 (1858)<sup>4</sup>. *Cemiostoma coffeella* Stn. Ent. Wk. Int. 10 110-11 (1861)<sup>5</sup>. *Elachista coffeella* Ntnr. Obs. Enemies Coffee-tree Ceylon 24 (1861)<sup>6</sup>: (2 edn.) 18 (1872)<sup>7</sup>: (Green's edn.) 16 (1880)<sup>8</sup>. "*Larva . . . de uma especie de noctuella*" Madinier Rev. Agr. Imp. Inst. Fluminense 3 33 (IV. 1870)<sup>9</sup>. *Cemiostoma coffeellum* P. Mann. Am. Nat. 6 332-41 tf. 341 1-6 (VI. 1872), 596-607 tf. 605 1-6 (X. 1872)<sup>10</sup>. *Leucoptera coffeella* Wlsm. Pr. Z. Soc. Lond. 1897 141-2 sp. 214 (1897)<sup>11</sup>; Busck US. Dp. Agr. Div. Ent. (n. s.) Bull. 22 89 (1900)<sup>12</sup>.

Hab. AMERICA, C-I-S. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (*H. H. Smith*). West Indies<sup>1-12</sup>—PORTORICO<sup>12</sup>: ⊕ *Coffea*, I-II. 1899 (*A. Busck*)<sup>12</sup>—GUADELOUPE<sup>1-8, 9-11</sup>: ⊕ *Coffea arabica*, I-XII, ex. I-XII (*G. S. Perrottet*)<sup>1-5, 9-11</sup>—MARTINIQUE<sup>9-11</sup>: ⊕ *Coffea arabica* (*P. Madinier*)<sup>9-11</sup>. South America<sup>10-11</sup>—BRAZIL (introduced from Antilles)<sup>10-11</sup>: RIO DE JANEIRO<sup>10-11</sup>: Vassouras, ⊕ *Coffea arabica*, III<sup>b</sup>-VI<sup>e</sup>, ⊙ I, III<sup>b</sup>-VI<sup>e</sup> (*B. P. Mann*)<sup>10-11</sup>.

2. *Leucoptera entemopa*, sp. n.

Antennae  $\frac{3}{4}$ ; pure white, with broad, convex, white eye-caps at the base. Head shining, pure white; face sloping, completely covered with broad shield-like scales, concealing the mouth-organs except the slender haustellum. Thorax white. Forewings silvery white, with a very slight ochreous shade in the

base of the cilia at the extreme apex; in the cilia beneath the apex is a minute black dot, accompanied by a few metallic silvery scales beneath it, this, together with the slight apical shade, giving the appearance of an incised margin, whereas these markings are only in the cilia the wing-apex being narrowly produced upward; cilia pure white. *Exp. al.* 6 mm. *Hindwings* tapering acutely; silvery grey; cilia pure white. *Abdomen* silvery white. *Legs* silvery white; the hind tibiae hairy above and beneath.

*Type* ♀ (66816) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66817) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*). Two specimens.

### 3. *Leucoptera salicis*, sp. n. (Tab. X. fig. 5.)

*Antennae* yellowish brown; eye-caps broad, smooth, white. *Palpi* minute, dependent. *Head* smooth, white; the face with a faint golden tinge. *Thorax* white. *Forewings* silvery white, with a pair of short, outwardly oblique, pale greyish fuscous, costal streaklets beyond the middle, their points slightly diverging, the space between them pale golden yellow; these are succeeded by a shorter, less oblique, pale fuscous costal streaklet, geminate at its base, pointing like the others in the direction of a pale golden metallic terminal spot, of which the inner end consists of raised dark golden-brown scales, and its outer end of similar raised black scales; the apex of the wing above this is tinged with golden yellow, and a slight darker curved line runs through the apical cilia, of which the outer ends are white, except at the extreme apex. *Exp. al.* 8 mm. *Hindwings* very pale, shining, bone-greyish; cilia white. *Abdomen* white. *Legs* white, hind tarsi slightly shaded.

*Type* ♂ (7267) Mus. Wlsm. BM.

*Hab.* MEXICO: MEXICO: Mexico City, ⊕ *Salix* sp., ex VI. 1894 (*F. Gudmann*). Unique.

## OPOSTEGA Z.

*Type: Elachista salaciella* Tr.

OPOSTEGA Z. *Isis* 32:1839 214 no. 39 sp. 1-6 (1839); *Linn. Ent.* 3 250, 279-86, 344 sp. 1-4 (1848); 2 Pf. 2:40-3 (1847); *Stn. Ins. Br. Lp-Tin.* 283, 288-90 no. 4 sp. 1-3 Pf. 8:9<sup>a-c</sup> (1854); *Wlsm. Pr. Z. Soc. Lond.* 1897 139-41 no. 81 sp. 208-11 (1897); *Stgr-Rbl. Cat. Lp. Pal.* 2 220 no. 433 sp. 4278-83 (1901); *Dyar Bull. US. Nat. Mus.* 52 547 sp. 6227-31 (1902); *Wlsm. Fn. Haw.* 1 711-12, 753 no. 51 sp. 414-5 Pf. 25:12-13 (1907).

### 1. *Opostega perdigna*, sp. n. (Tab. X. fig. 6.)

*Antennae* aeneous; eye-caps white. *Head* white. *Thorax* white, with a brassy gloss. *Forewings* white, with a brassy gloss; a small golden brownish dorsal spot, scarcely beyond one-third, a small elongate costal shade of the same colour a little beyond the middle, and a golden brown patch at the apex, with two converging costal streaks, coming through the cilia and terminating in its outer extremity, beyond which is a black triangular dot with a wedge-shaped golden brown patch in the cilia beyond it; terminal and tornal cilia whitish, with a faint brassy brown lustre. *Exp. al.* 12 mm. *Hindwings* and cilia pale greyish brown. *Abdomen* greyish brown. *Legs* with bristly tibiae and tarsi; pale aeneous.

*Type* ♀ (66818) Mus. Wlsm. BM.

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Unique.

## 2. *Opostega elachista*, sp. n. (Tab. X. fig. 7.)

*Antennae* bronzy greyish; eye-caps ivory-white. *Head* ivory-white. *Thorax* ivory-white, slightly grey tinged. *Forewings* ivory-white, with a faint yellowish gloss; an obscure, small, bronzy grey, dorsal spot at a little beyond one-third; a conspicuous bronzy grey costal spot a little beyond the middle; two small bronzy grey streaks in the costal cilia, and one in the dorsal, tending to converge upon a black apical dot, beyond which is another short oblique streak in the cilia; cilia pale bronzy at the apex, shading to whitish grey about the tornus. *Exp. al.* 9.5 mm. *Hindwings* pale grey; cilia tawny grey. *Abdomen* pale bronzy brownish. *Legs* shining, whitish aeneous.

*Type* ♂ (66790) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*). Unique.

Apart from the difference in size, this differs from *perdigna* Wlsm. in the costal spot being darker and larger, the two anteapical dark costal streaks being more parallel, not tending to converge, and in the almost entire absence of the golden shade before the apical black dot.

## 3. *Opostega pumila*, sp. n. (Tab. X. fig. 9.)

*Antennae* very pale ochreous; eye-caps white. *Head* and *Thorax* white, the latter with a faint aeneous tinge. *Forewings* white, with a faint aeneous tinge; with two golden brownish, parallel, costal streaks, the first merging in an apical shade of the same colour, which also receives a shorter converging streak, from above the apex, and is followed by a minute round black dot, beyond which there is another short transverse streak through the cilia; cilia at the apex tinged with golden brown, on the dorsum and tornus yellowish white. *Exp. al.* 6.5 mm. *Hindwings* and cilia very pale brownish grey. *Legs* very pale aeneous.

*Type* ♂ (66772) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

This species is nearly allied to the West Indian *venticola* Wlsm., but differs in the absence of a dorsal spot, and in its slightly darker hindwings.

## 4. *Opostega congruens*, sp. n. (Tab. X. fig. 8.)

*Antennae* brassy grey; eye-caps pale grey. *Head* and *Thorax* aeneous. *Forewings* shining, bronzy; with three, nearly parallel, costal streaks in the costal and two in the dorsal cilia—the space between their extremities cupreous, followed by a black dot, beyond which is another transverse streak in the cilia—these streaks are all greyish fuscous; cilia bronzy. *Exp. al.* 10 mm. *Hindwings* and cilia bronzy, slightly less yellow than the forewings, thus appearing a little darker. *Abdomen* bronzy grey. *Legs* aeneous.

*Type* ♂ (66791) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

## OPOGONA Z.

= §†*Lozostoma* Stn. (†*Loxostoma* Wlsm.); = CACHURA Wkr.

*Type* 1: *Opostega dimidiatella* Z. (Z. 1853).

OPOGONA Z. Bull. Soc. Imp. Nat. Mosc. 26: 1853 504–8 Pf. 4: 13–16 (1853); Stgr. Berl. Ent. Zts. 14 325 sp. 110 (1870); Stgr-Wk. Cat. Lp. Eur. 335 no. 300 sp. 2961–2 (1871); Ldr. Hor. Soc. Ent. Ross. 8 26 (1872); F. & R. Reise Nov. Zool-Lp. 2 expl. Pf. 139·8 (1875);

Moore Lp. Ceyl. **3** 526 (1887); Swinh-Cotes Cat. Moths Ind. 723 sp. 4945 (1889); Wlsm. & Drnt. Ent. Mo. Mag. **36** 180 (1900); Stgr-Rbl. Cat. Lp. Pal. **2** 220 no. 432 sp. 4276-7 (1901); Snln. Tijd. Ent. **46** 26, 52-3 sp. 21 (1903); v. Dvnt. Tijd. Ent. **46** 83-4 sp. 4 Pf. **10** · 1<sup>a-b</sup> (1904); Meyr. Tr. Roy. Soc. S-Aust. **30** 55 (1906); Jr. Bomb. NH. Soc. **17** 417 (1906), 750, 986-7 (1907); Wlsm. Fn. Haw. **1** 712-4, 737, 753 no. 52 sp. 416 Pf. **25** · 14 (1907); Pr. Z. Soc. Lond. **1907** 1015-6 no. 75 sp. 153 (1908); Meyr. Pr. Z. Soc. Lond. **1908** 737 (1908); Swzy. Rp. Exp. Stn. Hawaii. Div. Ent. Bull. **6** 8, 16-19 Pf. **3** · 1-5 (1909); Meyr. Ann. S-Afr. Mus. **5** 376-7 (1909); Rec. Ind. Mus. **5** 230 (1910); Wlsm. Ent. Mo. Mag. **46** 259 (1910); Meyr. Tr. Linn. Soc. Lond. (2 s. Z.) **14** 293 sp. 77-8 (1911); Ann. Transv. Mus. **3** 330 (1913).

Type 2: *Lozostoma flavofasciata* Stn. (Wlsm. 1907).

§†*Lozostoma* Stn. Tr. Ent. Soc. Lond. (n. s.) **5** 124-5 sp. 22-3 (1859); Wkr. Cat. Lp. BM. **30** 1041 (1864); Moore Pr. Z. Soc. Lond. **1867** 671 (1867); Swinh-Cotes Cat. Moths Ind. 722 sp. 4941-2 (1889); Meyr. Pr. Linn. Soc. NSW. **22** 298, 415-20 no. 31 sp. 225-35 (1897).

§†*Lozostoma* Stn. (†*Loxostoma*) is invalid through homonymy with *Loxostoma* Biv. (1838) *Moll.*—Wlsm. Fn. Haw. **1** 712 (1907).

Type 3: *Cachura objectella* Wkr. (Wkr. 1864).

*CACHURA* Wkr. Cat. Lp. BM. **30** 918 no. 8 sp. 1 (1864); Moore Lp. Ceyl. **3** 526 (1887); Swinh-Cotes Cat. Moths Ind. 723 sp. 4946 (1889).

### 1. *Opogona metanastes*, sp. n. (Tab. X. fig. 10.)

*Antennae* pale fawn-ochreous. *Palpi* with the usual flattened terminal joint; pale fawn-ochreous, shaded with brown above. *Head* and *Thorax* fawn-brown. *Forewings* fawn-brown, with a paler streak on the outer half, extending from beyond the middle of the fold through the lower angle of the cell to the cilia below the apex; at the apex is a slender silvery metallic streak, dark margined on either side, the brown cilia above the apex also showing a slight metallic lustre along their tips; underside shining bronzy purplish, with a distinct golden metallic lustre about the apex. *Exp. al.* 11 mm. *Hindwings*  $\frac{1}{2}$ , pale bronzy brown; cilia fawn-brown. *Abdomen* fawn-brown. *Legs* pale fawn-brownish.

*Type* ♀ (66773) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

This species is smaller and darker than *xerota* Wlsm., and has narrower wings; it is easily distinguishable by the metallic streak near the apex of the forewings—the type is in poor condition, but obviously distinct.

### 2. *Opogona pyrographa*, sp. n.

*Antennae* fawn-ochreous. *Palpi* with the terminal joint flattened and dilated; fawn-ochreous, much darker on the upper side. *Head* brownish fuscous; face pale fawn-ochreous. *Thorax* brownish fuscous. *Forewings* pale fawn-ochreous, longitudinally streaked with brownish fuscous; the dorsum is almost entirely suffused with this dark colour throughout, and there is a broad streak of the same running from the base along the cell and to the apex, dilated downward to the fold before and about the middle; a shorter streak, above this, commences beyond the base and is lost in a dark costal spot at the commencement of the cilia; cilia pale fawn-ochreous, except where divided at the extreme apex by the



narrow end of the median streak. *Exp. al.* 18-20 mm. *Hindwings* bronzy brownish; cilia dark brownish grey. *Abdomen* brownish grey, paler beneath. *Legs* fawn-ochreous, shaded externally on tibiae and tarsi with brownish fuscous.

*Type* ♀ (66819) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66821) US. Nat. Mus.]

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000-5000 ft., 1880 (*G. C. Champion*). Three specimens.

### 3. *Opogona xerota*, sp. n. (Tab. X. fig. 11.)

*Antennae* fawn-ochreous. *Palpi* widely diverging, recurved, terminal joint flat, wider than the median, obtuse; fawn-ochreous. *Maxillary Palpi* well-developed, bent outward at half their length. *Head* greyish fuscous above; face pale fawn-ochreous. *Thorax* greyish fuscous. *Forewings* fawn-ochreous, shaded with dark greyish fuscous along the basal half of the dorsum; a greyish fuscous spot, on the costa before the apex, from which a slender shade-line is traceable, within the margin to the apex, meeting at an acute angle a similar line running along the termen, the upper one being reduplicated in the apical cilia, both preceded by a few fuscous scales on the outer fifth of the wing; with this exception the cilia are fawn-ochreous; underside shining bronzy brown. *Exp. al.* 13 mm. *Hindwings* dark bronzy brownish ochreous; cilia paler. *Abdomen* dark brownish ochreous; pale fawn-ochreous beneath. *Legs* pale fawn-ochreous; tibiae somewhat hairy.

*Type* ♀ (66824) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUE: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*). Unique.

### 4. *Opogona sertta*, sp. n. (Tab. X. fig. 12.)

*Antennae* pale cinereous. *Palpi* divergent, with terminal joint obtuse, not dilated; pale cinereous. *Head* brownish fuscous; face pale cinereous. *Thorax* brownish fuscous. *Forewings* bronzy brownish fuscous, transversely striated with very pale cinereous on the apical third, these striae alternating with rows of brownish fuscous scales, darker than the base of the wing; on the costa, at two-thirds, is an outwardly oblique, pale cinereous, cuneiform streak, dark-margined internally; a similar streak on the dorsum, commencing a little nearer to the base and also dark-margined on its inner edge; cilia strongly striated. *Exp. al.* 8 mm. *Hindwings* nearly as broad as the forewings, tapering outward; slaty brownish fuscous. *Legs* pale cinereous, tinged with brownish fuscous on the outer sides of the tibiae which are somewhat hairy.

*Type* ♀ (66792) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*). Unique.

## SETOMORPHA Z.

= *SEMIOTA* Dietz.

*Type*: *Tinea insectella* F. (= *rutella* Z.; Z. 1852).

SETOMORPHA Z. *Lp-Micropt.* Wahlbg. Caffr. 93-6 sp. 1 (1852): Kngl. Svensk. Vet-Ak. Hndl. 73:1852 93-6 sp. 1 (1854); Wlsm. Tr. Ent. Soc. Lond. 1891 81-2 Pf. 7·73 ♀ (1891); Wlsm. Pr. Z. Soc. Lond. 1897 168-9 no. 107 sp. 281-2 (1897); Stgr-Rbl. Cat. Lp. Pal. 2 233 no. 4494 (1901); Dyar Bull. US. Nat. Mus. 52 575 sp. 6549-51 (1902); Dietz Tr. Am. Ent. Soc. 31 4, 14-16, 91 ♀ (1905). *SEMIOTA* Dietz Tr. Am. Ent. Soc. 31 4, 18-20, 91 Pf. 1·6, 6·4 ♂ (1905); Busck Can. Ent. 38 347 (1906): Pr. US. Nat. Mus. 30 734-5 tf. 9 ♂-10 ♀ (1906); Wlsm. Fn. Haw. 1 726, 754 no. 57 sp. 434 (1907): Pr. Z. Soc. Lond. 1907 1016-9 no. 76 sp. 154 (1908).

1. *Setomorpha insectella* F. (Tab. X. fig. 13.)

=*rutella* Z. ♂ ♀<sup>26</sup>; =*rupicella* Z. ♂<sup>26</sup>; =*operosella* Z. ♀ (= *inamoenella* Z. ♂<sup>24</sup>; =*runderella* Z. ♂<sup>24</sup>; =*multimaculella* Chmb. ♂<sup>24</sup>)<sup>26</sup> =*dryas* Btlr. ♀<sup>25</sup>; =*corticinella* Snln. ♂ ♀<sup>26</sup>; =*\*bogatatella* (nec Wkr.) Alphk. ♀<sup>26</sup>; =*discipunctella* Rbl. ♀<sup>26</sup>.

*Tinea insectella* F. Ent. Syst. 3 (2) 303 sp. 72 (1794)<sup>1</sup>; Sppl. Ent. Syst. 489 sp. 47 (1798)<sup>2</sup>.

*Setomorpha rutella* Z. Lp-Micropt. Wahlbg. Caffr. 94-5 sp. 1 (1852)<sup>3</sup>; Kngl. Svensk. Vet-Ak. Hndl. 73:1852 94-5 sp. 1 (1854)<sup>4</sup>. *Setomorpha rupicella* Z. Lp-Micropt. Wahlbg. Caffr. 95-6 (1852)<sup>5</sup>; Kngl. Svensk. Vet-Ak. Hndl. 73:1852 95-6 (1854)<sup>6</sup>. *Setomorpha operosella* Z. Verh. ZB. Ges. Wien 23:1873 Abh. 223-4 sp. 1 (1873)<sup>7</sup>. *Setomorpha inamoenella* Z. Verh. ZB. Ges. Wien 23:1873 224-5 sp. 2 (1873)<sup>8</sup>. *Setomorpha ruderella* Z. Verh. ZB. Ges. Wien 23:1873 225 sp. 3 (1873)<sup>9</sup>. *Gelechia? multimaculella* Chmb. Bull. US. GG. Surv. 4 89-90, 145 (1878)<sup>10</sup>. *Chrestotes dryas* Btlr. Ann-Mag. NH. (5 s.) 7 401 sp. 39 (1881)<sup>11</sup>. *Setomorpha corticinella* Snln. Tijd. Ent. 28 24-5 sp. 10 Pf. 2.12 ♂-15 ♀ (1885)<sup>12</sup>. *Setomorpha \*bogatatella* Alphk., Rmff. Mem. Lp. 5 231 sp. 55 (1889)<sup>13</sup>. *Setomorpha rutella* Wlsm. Tr. Ent. Soc. Lond. 1891 81-2 Pf. 7.73 ♀ (1891)<sup>14</sup>. *Setomorpha discipunctella* Rbl. Ann. KK. Hofmus. Wien 7 267-8, 283 sp. 46 Pf. 17.16 ♀ (1892)<sup>15</sup>. *Setomorpha rupicella* Wlsm. Pr. Z. Soc. Lond. 1897 168 sp. 281 (1897)<sup>16</sup>. *Setomorpha discipunctella* Stgr-Rbl. Cat. Lp. Pal. 2 233 sp. 4494 (1901)<sup>17</sup>. *Plutella multimaculella* Dyar Bull. US. Nat. Mus. 52 492 sp. 5509 (1902)<sup>18</sup>. *Setomorpha operosella* Dyar Bull. US. Nat. Mus. 52 575 sp. 6549 (1902)<sup>19</sup>. *Setomorpha inamoenella* Dyar Bull. US. Nat. Mus. 52 575 sp. 6550 (1902)<sup>20</sup>. *Setomorpha ruderella* Dyar Bull. US. Nat. Mus. 52 575 sp. 6551 (1902)<sup>21</sup>. *Semiota operosella* Dietz Tr. Am. Ent. Soc. 31 18-19, 91 Pf. 1.6 (1905)<sup>22</sup>. *Semiota inamoenella* Dietz Tr. Am. Ent. Soc. 31 18, 19, 91 Pf. 6.4 ♂ (1905)<sup>23</sup>. *Setomorpha operosella* Busck Pr. US. Nat. Mus. 30 734-5 tf. 9 ♂-10 ♀ (1906)<sup>24</sup>. *Setomorpha rutella* Wlsm. Fn. Haw. 1 754, 726 sp. 434 (1907)<sup>25</sup>. *Setomorpha insectella* Wlsm. Pr. Z. Soc. Lond. 1907 1016-19 sp. 154 (1903)<sup>26</sup>; Rbl. Ann. KK. Hofmus. Wien 24 365, 373 sp. 345 (1910)<sup>27</sup>.

*Types* ♂ ♀: *insectella* F. (Africa) Mus. . . .; *rutella* Z. (Caffraria) ♂ Mus. Stockholm, ♀ Mus. Wlsm. (102233 Zell. Coll.) BM.; *rupicella* Z. ♂ (102234, Havannah) Mus. Wlsm. (Zell. Coll.) BM.; *operosella* Z. ♀, *inamoenella* Z. ♂, *runderella* Z. ♂, and *multimaculella* Chmb. ♂ (Texas) Mus. Cambr., Mass.; *dryas* Btlr. ♀ (1881: 7, Honolulu) BM.; *discipunctella* Rbl. ♀ (Tenerife) Hofmus. Vienna.

*Hab.* HAWAIIA<sup>11, 25-6</sup>: OAHU<sup>11, 25-6</sup>: HAWAII<sup>25-6</sup>. AMERICA, N-C-S-I<sup>5-10, 16, 18-27</sup>. United States<sup>7-10, 18-24, 26</sup>—KANSAS<sup>22, 26</sup>—TEXAS<sup>7-10, 18-24, 26</sup>—ARIZONA: 1882 (*H. K. Morrison*). Central America<sup>26</sup>—MEXICO<sup>26</sup>: DURANGO: near Durango City (*H. Becker*): VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*); Cordova, V. 1908 (*F. Knab*): GUERRERO<sup>26</sup>: Amula, 6000 ft., VIII. (*H. H. Smith*)<sup>26</sup>—GUATEMALA<sup>26</sup>: ALTA VERA PAZ<sup>26</sup>: Balheu, 3850 ft., 3-5. II. 1880 (*G. C. Champion*)<sup>26</sup>; Purula, 4000 ft., 2-5. X. 1879 (*G. C. Champion*): BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*)—COSTA RICA<sup>26</sup>: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*)<sup>26</sup>—PANAMA: CANAL ZONE: Tabernilla, VI. 1907 (*A. Busck*). South America<sup>16, 25-7</sup>—COLOMBIA<sup>26</sup>: CUNDINAMARCA<sup>26</sup>: Bogota (*Baron von Nolcken*)<sup>26</sup>: CAUCAS: Condoto Choco, ⊕ birds' skins, ex. 16. I. 1914 (B.M.)—BRITISH GUIANA: Bartica, R. Essequibo, 7. V. 1901 (*H. S. Parish*)—BRAZIL<sup>16, 25-6</sup>: PARA<sup>16, 25-6</sup>: Pará<sup>16</sup>, 9. X-10. XII. 1893, 1. IV. 1894 (*A. Schulz*)<sup>26</sup>. West Indies<sup>5-6, 16, 25-6</sup>—BAHAMAS: NEW PROVIDENCE: Nassau, 28. V. 1898 (*J. L. Bonhote*)—CUBA<sup>5-6, 16, 26</sup>: BIOL. CENTR.-AMER., Heter., Vol. IV., November 1914. 2 zz

Havannah<sup>5-6, 16, 26</sup>—JAMAICA<sup>26</sup>: ST. ANN<sup>26</sup>: Moneague, 5. I. 1905 (*Wlsm.*)<sup>26</sup>; Runaway Bay, 23. II. 1905 (*Wlsm.*)<sup>26</sup>—HAYTI<sup>16</sup>: Port-au-Prince, 25. V. 1894 (*F. Gudmann*)<sup>16</sup>. CANARIES<sup>13, 15, 17, 25-7</sup>—TENERIFE<sup>13, 15, 17, 25-7</sup>. AFRICA<sup>1-4, 14, 26</sup>—SIERRA LEONE<sup>26</sup>—GOLD COAST<sup>26</sup>—CONGO<sup>26</sup>—CAFFRARIA (Limpopo-Gariep)<sup>3-4, 14, 26</sup>. ASIA<sup>12, 26</sup>—INDIA<sup>26</sup>—CEYLON<sup>26</sup>—BURMAH: Bhamo, ⊕ in Beetles, ex. 26. XI-17. XII. 1910 (B.M.)—CELEBES<sup>26</sup>: Bontain, 3000-5000 ft., 1896 (*W. Doherty*). AUSTRALIA<sup>26</sup>—QUEENSLAND<sup>26</sup>: Dawson River, 23. X. 1890 (*G. Barnard*).

This species has been bred from Collections of Insects<sup>1, 26</sup>, from birds' skins, from muscular fibre attached to skull of Hippopotamus<sup>26</sup>, from moss (perhaps containing admixture of woollen rubbish)<sup>26</sup>, and from bales of country blanketing<sup>26</sup>.

Dietz describes two species of *Setomorpha* [Tr. Am. Ent. Soc. 31 15-16 (1905)]: *majorella* Dietz ♀ (= *transversestrigella* Dietz ♂) is probably not distinct from *insectella* F., but *sigmoidella* Dietz apparently differs in having "3 and 4 of hindwing remote at their origin."

### HARMACLONA Busck.

Type: *Harmaclona cossidella* Busck (Busck 1914).

HARMACLONA Busck Pr. US. Nat. Mus. 47 63-4 (1914).

#### 1. *Harmaclona cossidella* Busck.

*Harmaclona cossidella* Busck Pr. US. Nat. Mus. 47 63-4 (1914)<sup>1</sup>.

Type ♂ ♀ (16767) US. Nat. Mus.

*Hab.* Central America—MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Misantla (*R. Müller*)<sup>1</sup>; Jalapa (*W. Schaus*)<sup>1</sup>; Orizaba (*W. Schaus*)<sup>1</sup>—COSTA RICA<sup>1</sup>: Juan Viñas (*W. Schaus*)<sup>1</sup>; Sixola River (*W. Schaus*)<sup>1</sup>—PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: Cabima, Porto Bello, Alhajuela, IV-X. (*A. Busck*)<sup>1</sup>.

### HOMODOXUS, gen. n.

(ὁμόδοξος=of the same opinion.)

Type: *Homodoxus aristula* Wlsm. (Tab. X. fig. 15.)

*Antennae*  $\frac{3}{4}$ , simple, stout and somewhat flattened. *Labial Palpi* curved, ascending, projecting a little beyond the head; both joints somewhat flattened and dilated with closely packed scales, terminal joint short. *Maxillary Palpi* minute. *Haustellum* weak. *Ocelli* obsolete. *Head* and face densely clothed with somewhat appressed hair-scales. *Thorax* smooth. *Forewings* elongate, obtusely lanceolate: *neuration* 11 veins, all separate (apparently 8 obsolete), 7 to costa; 2 from near angle of cell. *Hindwings* 1, obtusely lanceolate; cilia almost  $\frac{1}{2}$ : *neuration* 8 veins, all separate; 5-6 somewhat approximate at base. *Abdomen* moderate. *Legs*: hind tibiae with long hairs above.

Probably most nearly allied to *Tiquadra* Wkr., with which it agrees in the general form of the head and palpi, but differs in having only 11 veins in the forewings, a radial vein (probably 8) being obsolete—alliance with *Lindera* Blanchard is perhaps also indicated.

1. **Homodoxus aristula**, sp. n. (Tab. X. fig. 15.)

*Antennae* white. *Palpi* white, the median joint with a dark fuscous shade externally, extending to the end of the joint along its upper edge. *Head* and *Thorax* white. *Forewings* shining, white, with a series of seven fuscous spots along the costa, all of which become rich metallic-peacock-green immediately below the margin—the first, close to the base, is larger than the second; the third, at one-fourth from the base, forms the upper extremity of a transverse fascia, dilated obliquely backward to the dorsum; the fourth, tending obliquely outward, is shortly produced along the cell; the fifth, about the middle, is small; the sixth forms the upper extremity of a conspicuous, widely dilated, transverse fascia, tending obliquely inward to the middle of the dorsum, its margins somewhat sinuate; the seventh, small and triangular, before the apex—these markings are all clearly defined, and are brilliant iridescent-peacock-green, except on the costa; cilia white. *Exp. al.* 14–24 mm. *Hindwings* white, with a slight greyish ochreous tinge; cilia white. *Abdomen* greyish ochreous. *Legs* white, the anterior and median pairs with three dark greyish fuscous bands.

*Type* ♂ (66622, *Las Mercedes*); ♀ (66624, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66623) US. Nat. Mus.]

*Hab.* Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879–80 (*G. C. Champion*): RETALHULEU: Las Mercedes, X–XI. 1880 (*G. C. Champion*). Four specimens.

A very distinct and beautiful species.

TIQUADRA Wkr.

= OSCELLA Wkr.<sup>2</sup>; = MANCHANA Wkr.<sup>2</sup>; = VENTIA Wkr.<sup>4</sup>; = ACUREUTA Z.<sup>2</sup>

*Type* 1: *Tiquadra inscitella* Wkr. (Wkr. 1863). (Tab. X. fig. 14.)

TIQUADRA Wkr. Cat. Lp. BM. 28 519 no. 35 sp. 1 (1863)<sup>1</sup>; Wlsm. Tr. Ent. Soc. Lond. 1881 234–6, 286 Pf. 10·10 (1881)<sup>2</sup>; Pr. Z. Soc. Lond. 1891 517–8, 545 no. 36 sp. 66–8 (1892)<sup>3</sup>; 1897 167 no. 105 sp. 277–8 (1897)<sup>4</sup>; Tr. Ent. Soc. Lond. 1897 66 Pf. 3·26 (1897)<sup>5</sup>.

*Type* 2: *Oscella aeneonivella* Wkr. (Wkr. 1864).

OSCELLA Wkr. Cat. Lp. BM. 29 783–4 no. 70 sp. 1 (1864).

*Type* 3: *Manchana avitella* Wkr. (Wkr. 1866).

MANCHANA Wkr. Cat. Lp. BM. 35 1818 (1866). ACUREUTA Z. Hor. Soc. Ent. Ross. 13 198–205 sp. 1–4 (1877) [Type: *avitella* Wkr. (= *aspera* Z.; Wlsm. 1891)].

*Type* 4: *Ventia reversella* Wkr. (Wkr. 1866).

VENTIA Wkr. Cat. Lp. BM. 35 1838–9 (1866).

1. **Tiquadra inscitella** Wkr. (Tab. X. fig. 14.)

*Tiquadra inscitella* Wkr. Cat. Lp. BM. 28 519 sp. 1 (1863)<sup>1</sup>; Wlsm. Tr. Ent. Soc. Lond. 1881 235 (1881)<sup>2</sup>.

*Type* ♀ (1848: 11, *Mexico*) BM.

*Hab.* Central America—MEXICO<sup>1</sup>: (*Argent*)<sup>1</sup>: DURANGO (*A. Forrer*): VERA CRUZ:

Jalapa, 4000 ft. (*W. Schaus*; *M. Trujillo*; *Hoega*); Orizaba (*W. Schaus*): OAXACA: Salina Cruz, 1906 (*W. Schaus*)—COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*).

## 2. *Tiquadra stenopa*, sp. n.

*Antennae, Palpi, Head, and Thorax* pale stone-whitish, more or less profusely, and faintly, speckled with pale brownish grey. *Forewings* with the speckling around the costa and termen aggregated into irregular, more or less confluent spots—it forms a faint shade also along the upper edge of the cell and across its outer extremity, as well as around the apex and termen, where many of the scales are tipped with darker brown, the preceding space as well as the dorsal area being comparatively free from speckling; cilia. pale stone-whitish, also slightly speckled. *Exp. al.* 28–34 mm. *Hindwings* pale stone-grey, with a faint brassy yellowish tinge; cilia stone-whitish. *Abdomen* pale stone-ochreous. *Legs* stone-whitish.

*Type* ♂ (66626); ♀ (66627) *Las Mercedes*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66628) US. Nat. Mus.]

*Hab.* GUATEMALA: ALTA VERA PAZ: Coban, 3800 ft., 1880 (*G. C. Champion*): GUATEMALA: Guatemala City (*J. Rodriguez*): RETALHULEU: Las Mercedes, 3000 ft., 1880 (*G. C. Champion*). Six specimens.

This species differs from its allies in the peculiar shape of the forewings, which gradually taper outward beyond the middle to an evenly rounded obtuse apex.

## 3. *Tiquadra nivosa* F. & R.

*Scardia? nivosa* F. & R. *Reise Nov. Zool-Lp.* 2 Pf. 139·50 (1875)<sup>1</sup>.

*Type* ♀ (1913:86, *Brazil*) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*): CANAL ZONE: Tabernilla, VI. 1908 (*A. Busck*). South America<sup>1</sup>—ECUADOR: Chimborazo, VIII. 1897 (*W. F. H. Rosenberg*)—BRAZIL<sup>1</sup>: RIO DE JANEIRO<sup>1</sup>: Nova Friburgo<sup>1</sup>; Petropolis, 1881 (*H. Doer*): SANTA CATHARINA.

## 4. *Tiquadra avitella* Wkr.

n. synn. = *runderella* F. & R.; = *aspera* Z.

*Manchana avitella* Wkr. *Cat. Lp.* BM. 35 1818 (1866)<sup>1</sup>. *Scardia? ruderella* F. & R. *Reise Nov. Zool-Lp.* 2 Pf. 138·46 (1875)<sup>2</sup>; Z. Hor. Soc. Ent. Ross. 13 200 (1877)<sup>3</sup>. *Acureuta aspera* Z. Hor. Soc. Ent. Ross. 13 199–201 sp. 1 (1877)<sup>4</sup>. *Tiquadra aspera* Mschlr. Ab. Senck. Nat. Ges. 15 339 sp. 600, 354 sp. 913 (1890)<sup>5</sup>; Wlsm. Pr. Z. Soc. Lond. 1891 518, 545 sp. 66 (1892)<sup>6</sup>: 1897 167 sp. 277–8 (1897)<sup>7</sup>.

*Types*: *avitella* Wkr. ♀ (1865:86, *Santa Martha*) BM.; *runderella* F. & R. ♀ (1913:86, *Amazonas*) Roths. Coll. (*Fldr. Coll.*) BM.; *aspera* Z. ♂ (102,243, *Colombia*) Mus. Wlsm. BM.

*Hab.* AMERICA, C-S-I. Central America—GUATEMALA: ALTA VERA PAZ: Purula, 4000 ft., X. 1879 (*G. C. Champion*)—COSTA RICA: CARTAGO: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*): DARIEN: Caña Mines (*J. H. W. Tylecote*). South America<sup>1–7</sup>—COLOMBIA<sup>1, 4–7</sup>:



MAGDALENA<sup>1</sup>: Santa Marta (*P. Bouchard*)<sup>1</sup>; Minca, Sierra Nevada, 2000 ft., VI. 1899 (*H. H. Smith*)—BRAZIL<sup>2</sup>: AMAZONS (*H. W. Bates*)<sup>2</sup>. West Indies<sup>5-7</sup>—PORTORICO (*C. Krug*)<sup>5-7</sup>.

## ISOCORYPHA Dietz.

=†*SOCORYPHA* Busck.

Type: *Incurvaria mediotriatella* Clms. (Dietz 1905).

ISOCORYPHA Dietz Tr. Am. Ent. Soc. **31** 23, 42-3, 92 Pf. 5·5 (1905); Busck Can. Ent. **38** 348 (1906). †*SOCORYPHA* Busck Pr. Ent. Soc. Wash. **11** 185 (1909). ISOCORYPHA Busck Pr. Ent. Soc. Wash. **12** 26 (1910).

1. *Isocorypha limbata*, sp. n. (Tab. X. fig. 16.)

*Antennae* pale ochreous. *Palpi* brownish. *Head* pale ochreous. *Thorax* tawny brownish. *Forewings* pale ochreous, the margins tawny brownish, with three interruptions of the pale ground-colour; the rather broad dark margin is first interrupted on the dorsum, a little beyond the middle, then on the costa at two-thirds, and again, more widely, before the apex; cilia pale ochreous, with some brownish scales along their middle, the dark terminal band running through them at the extreme apex. *Exp. al.* 9 mm. *Hindwings* shining, very pale grey; cilia pale tawny grey. *Abdomen* greyish. *Legs* pale cinereous.

Type ♀ (66774) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

## PHYCIS F.

=*PHYCIA* Okn.; =*SCARDIA* Tr.; =\**EUPLOCAMUS* (nec Ltr.) Crt.; =*AGARICA* Sdf.; =*GYRA* Gistel; =*FERNALDIA* Grt.

Type 1: *Tinea boletella* F. (= \**boleti* F., Ochr. 1810; Okn. 1815; Hb. 1826).

PHYCIS F. Sppl. Ent. Syst. 420, 463-4 sp. 1-2 (1798); Wlknr. Fn. Par. Ins. **2** 310-11 no. 13 sp. 1-2 (1802); Ltr. HN. Crust-Ins. **3** 413 (1802); **14** 227 (1805); Gn. Crust-Ins. **4** 223-4 (1809); Ochr. Schm. Eur. **3** 120-4 no. 8 sp. 1-2 (1810). *PHYCIA* Okn. Lehrb. Naturg. Zool. 654 no. 3 sp. 1, p. xxiii (1815). PHYCIS Ochr. Schm. Eur. **4** 51 no. 36 sp. 1-3 (1816); St. Farg. & Serv. Enc. Meth. HN. Ins. **10** 115 sp. 1 (1825); Hb. Verz. Schm. 403 sp. 3887-9 (1826); Stph. Ill. Br. Ent. Haust. **4** 421 no. 1182 sp. 3888-9 (1835). *GYRA* Gistel Naturg. Thierr. p. x (1848).

[nec \**PHYCIS* (F.) Hw. Lp. Br. 492-7 no. 23 sp. 1-21 (1811); Zkn. Allg. Lit-Ztg. **3** 75 (1817); Mag. Zool. **3** 116-76 sp. 1-42 (1818); Sdf. Bull. Soc. Imp. Nat. Mosc. **10**:1837 (6) 94 no. 141: (7) 129 no. 141 (1837). *PHYCITA* Crt. Br. Ent. **5** expl. Pl. **233** (1828); Stgr-Rbl. Cat. Lp. Pal. **2** 38 no. 119 sp. 705-14 (1901)—Type: *spissicella* F. (=†*spicicella* Crt.) (*Phycita* Crt.).]

Curtis proposed the neonym *Phycita* because "*Phycis* having been long employed to designate a group of fishes, it cannot be retained with propriety." *Phycis* Artedi (1738) is too early, and Jordan and Evermann [Bull. US. Nat. Mus. **47** 2552 (1898)] adopt *Urophycis* Gill (1863) in lieu of †*Phycis* Schneider, Bloch's Syst. Ichth. **1801** 56, because this is "not *Phycis* Fabricius 1798 a genus of *Lepidoptera*."

The genonym *Phycis* F. is valid and must be used for either *boletella* F. or *spissicella* F. Ochseneimer was certainly justified in limiting the application of *Phycis* to the Tineid, and Zincken's arguments are fallacious, for Fabricius' description was obviously based on *boletella* F., and not on *spissicella* F.

Curtis founded the genus *Phycita* on *Tinea spissicella* F. (*†spicicella* Crt.) and cited this species as his Type—the genonym *Phycita* Crt. was adopted by Ragonot in his Monograph of the *Phycitinae*, and has since been generally used in that family.

[*nec* \**SCARDIA* (Tr.) Meyr. Pr. Linn. Soc. NSW. 17 (2 s. 7:1892) 481, 520–5 no. 12 sp. 60–6 (1893)—Type: *Tinea australasiella* Dnvn. (*MOERARCHIS*, gen. n., Drnt.)

*Phycis* F. (*Scardia* Tr.) has strongly folded maxillary palpi, while the Australian species included in *Scardia* by Meyrick (*l. c.*) are described as having “Maxillary palpi moderate, or rather short, porrected, loosely scaled”—these species are more nearly allied to *Elatobia* HS. (Type: *fuliginosella* Z.), which, however, differs in having HW: 5–6 stalked. Typical species of *Moerarchis*, gen. n., have 12 veins, all separate in the ♀, but in the ♂ FW: 4 is absent—*clonodes* Meyr. with FW: 8–9 stalked, and folded maxillary palpi, should be referred to *Morophaga* HS. (Type: *morella* Dp.)]—Drnt.

Type 2: *Noctua boleti* F. (= *mediella* Hb.; HS. 1853).

SCARDIA Tr. Schm. Eur. 8 290–1 (1830): 9 3–11 sp. 1–7 (1833). \**EUPLOCAMUS* (*nec* Dp.) Crt. Br. Ent. 13 expl. Pl. 591 (1836); Stn. List Br. An. BM. 16 Lp. 7–8 no. 6 sp. 1 (1854): Ins. Br. Lp-Tin. 17, 23–4 no. 6 sp. 1 Pf. 1·9<sup>c-d</sup> (1854). *AGARICA* Sdf. Bull. Soc. Imp. Nat. Mosc. 10:1837 (6) 94, 97 no. 135:(7) 129 no. 135 (1837). *EUPLOCAMUS* Ltr. (B. SCARDIA Tr.) Z. Isis 32:1839 187 no. 12 B. sp. 3–4 (1839): Linn. Ent. 6 86, 91–9 no. 1 B. sp. 3–6 (1852). SCARDIA HS. SB. Schm. Eur. 5 6, 19–20, 63 no. 4 sp. 13–15 Pf. 3·1–6 (1853), Pf. 46·314–5 (1851), Syst. Lp. Eur. 46 no. 318 sp. 13–15 (1855); Meyr. HB. Br. Lp. 710, 778–9 no. 31 sp. 1 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 235 no. 460 sp. 4520–3 (1901); Dyar Bull. US. Nat. Mus. 52 568 sp. 6473–4 (1902); Busck Pr. US. Nat. Mus. 27 777–8 (1904); Dietz Tr. Am. Ent. Soc. 31 22, 23–8, 92 Pf. 1·8 – 2·1 (1905); Busck Pr. Ent. Soc. Wash. 9 92–5 (1908): Pr. US. Nat. Mus. 47 65 (1914).

Type 3: *Fernaldia anatomella* Grt. (Grt. 1881).

FERNALDIA Grt. Bull. US. GG. Surv. 6 274–5 (1881).

### 1. *Phycis luctuosa*, sp. n.

*Antennae* in ♂ strongly bifasciculate; pale bronzy brownish. *Palpi*, median joint somewhat roughly clothed beneath, the shorter terminal joint stout, suberect; dark brown on the outer side, whitish ochreous on the inner side of median joint, a pale spot at the base and apex of terminal. *Head* roughly clothed; brownish ochraceous. *Thorax* subochraceous, margined with dark bronzy brown anteriorly. *Forewings* whitish ochraceous, with heavy shading of dark bronzy brown, commencing at the base and reaching to the commencement of the costal cilia, the margins clearly defined, much jagged and indented dorsally, and obliquely concave toward the apex—this heavy shade reaches at its widest parts, before and beyond the middle, nearly to the dorsum, which is speckled with the same colour, as is also the pale apical

portion of the wing, a somewhat conspicuous divided costal spot appearing before the apex; there is some pale mottling along the costa throughout, but especially on the basal third, indicating a series of partially obliterated spots; cilia ochreous, slightly mottled with brownish. *Exp. al.* 16–22 mm. *Hindwings* 1+, sericeous, shining, greyish ochreous; cilia ochreous. *Abdomen* ochreous. *Legs* ochreous; hind tarsi shaded with dark brownish.

*Type* ♂ (66827, *V. de Irazu*); ♀ (4625, *Jalapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66828) US. Nat. Mus.]

*Hab.* AMERICA, C-S. **Central America**—MEXICO: VERA CRUZ: Jalapa, 1887 (*W. Schaus*; *M. Trujillo*)—GUATEMALA: ALTA VERA PAZ: Sinanja, 8–15. V. 1879 (*G. C. Champion*)—COSTA RICA: CARTAGO: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2500–3000 ft., 1881–2 (*G. C. Champion*). **South America**—BOLIVIA: LA PAZ: Yungas, 1908 (*Seebold*). Eight specimens.

This species differs from *funeratella* Z. in the dark shade of the forewings failing to reach the dorsum, either before or beyond the middle—this character appears to be uniform in a series from different localities.

## 2. *Phycis iulina*, sp. n. (Tab. X. fig. 17.)

*Antennae* pale ochreous, with bars of raised dark brownish fuscous scales on each joint above. *Palpi* projecting nearly twice the length of the head in front, the median joint somewhat roughened beneath, the tuft projecting somewhat at its apex; terminal joint nearly as long as the median, smooth; pale ochreous, the median joint dark brownish fuscous nearly to its apex. *Maxillary Palpi* folded. *Head* rough; pale ochreous. *Thorax* pale ochreous; tegulae dark brownish fuscous. *Forewings* with the costa slightly bulged near the base, thence straight, apex depressed, obtusely rounded, termen oblique; pale ochreous, with a brassy sheen, and with large connected blotches of dark bronzy fuscous, through which a vinous tinge is visible wherever the scales are removed—these blotches commence at the base, where the dark colour nearly reaches the costa, but does not extend to the dorsum, at one-fourth its lower half is connected upward with the inner angle of a quadrate median blotch, extending from the costa nearly to the dorsum; this is again produced outward on its lower half forming a broad, somewhat triangular, anteterminal blotch, furcate above in the costal cilia and attenuate at its outer angle to the termen above the tornus; the costal space between these blotches and above the first are marked by broad, and sometimes geminated, short costal streaks, not oblique—of these there are eight or nine before the middle and five or six beyond the middle, one larger and more conspicuous than the others; a spot of the same colour runs through the cilia immediately above the apex, and two others on the termen below the apex, these somewhat broken up by the pale ochreous colour of the terminal cilia; a few brownish scales occur in the cilia at and before the tornus. *Exp. al.* 25 mm. *Hindwings* silky, pale greyish; cilia pale greyish ochreous. *Abdomen* pale greyish ochreous. *Legs* pale brassy ochreous.

*Type* ♂ (66825) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Unique.

## 3. *Phycis montium*, sp. n.

*Antennae* whitish ochreous, annulate with dark umber-brown. *Palpi* whitish ochreous; with the median joint rough beneath, shaded externally with umber-brown nearly to its apex; terminal joint shorter than the median, also dark umber-brown externally, on its basal half. *Maxillary Palpi* folded. *Head* brownish ochreous. *Thorax* umber-brown. *Forewings* slightly widened outward, costa slightly arched near the base, apex and termen rounded; shining, whitish ochreous, much mottled with dark umber-brown, of which there is an almost continuous, but irregular shade, reaching from the base of the costa

to the fold, which it touches in two places, and thence outward branching beyond the cell to the costa and termen; there are some small dark costal spots near the base, a large one on the middle, and a rather smaller one before the costal cilia, connected with the median shade in which a whitish dot lies at the end of the cell; three more umber-brown spots form a series round the apex and termen, connected by a line at the base of the pale cilia through which they extend. *Exp. al.* 15–22 mm. *Hindwings* pale, shining, brassy brownish; cilia slightly more greyish. *Abdomen* whitish ochreous, transversely shaded with brownish fuscous. *Legs* (missing)

*Type* ♀ (66831, *V. de Chiriqui*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66833–4) US. Nat. Mus.]

*Hab. Central America*—GUATEMALA: SOLOLA: Volcan de Atitlan, 2500–3500 ft., XII. 1880 (*G. C. Champion*)—COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*); Rio Sucio (*H. Rogers*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2500–3000 ft., 1881–2 (*G. C. Champion*). Five specimens.

Allied to *iulina* Wlsm., but differing in the distribution of its markings, in its smaller size, and in the colour of the hindwings.

#### 4. *Phycis isthmiella* Busck.

*Scardia isthmiella* Busck Pr. US. Nat. Mus. 47 65 (1914)<sup>1</sup>.

*Type* ♂ (16769) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.

#### 5. *Phycis minimella* Busck.

*Scardia minimella* Busck Pr. US. Nat. Mus. 47 65 (1914)<sup>1</sup>.

*Type* ♂ (16770) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.

### DRASTEIA, gen. n.

(*δραστία*=to be done.)

*Type*: *Drasteia mexica* Wlsm. (Tab. X. fig. 18.)

*Antennae* (broken) simple, basal joint without pecten. *Labial Palpi* with long hair-scales, projecting beneath the median joint and beyond the short terminal joint. *Maxillary Palpi* and *Haustellum* rudimentary. *Head* rough. *Thorax* with appressed scales. *Forewings* with the costa straight from the base (♂ with a narrow costal fold extending to beyond the middle), abruptly depressed at two-thirds, the apex uncate, termen very oblique, forming only a slight bend at the tornus, where the wing is at its greatest width: *neuration* 12 veins, all separate; 7 to costa. *Hindwings* broadly lanceolate, termen oblique: *neuration* 8 veins, all separate; 5 nearer to 6 than to 4. *Abdomen* moderate. *Legs*: hind tibiae and first tarsal joint clothed above with long hairs.

Closely allied to *Amydria* Clms., with which it agrees in *neuration*, but differs in wing-form, and in the less tufted palpi.

#### 1. *Drasteia mexica*, sp. n. (Tab. X. fig. 18.)

*Antennae* fawn-white, barred above with fuscous. *Palpi* fawn-whitish. *Head* hoary white. *Thorax* fawn-white in front, blending to fawn-brown posteriorly. *Forewings* white, delicately streaked and slightly suffused with pale and dark fawn-brown; the extreme costa is blackish at the base; the basal third of

the wing is sparsely speckled with pale fawn, a few dark scales causing a deeper shade below the fold; before the middle is a fawn-brown dorsal patch, sprinkled with darker scales and produced outward across the fold in long diffused streaks to the apex, some starting from the upper angle of the cell to which the suffusion extends; before the middle of the costa four or five transverse streaks appear to connect the narrow costal fold to the upper edge of the cell, and beyond the costal fold are five or six more distinct oblique streaks in a white ground, margined above and beneath by pale fawn, extending as far as the uncate apex; along the termen to the tornus runs a line of pale fawn, margined above by an equally narrow line of dark fawn-brown; the cilia, both costal and terminal, are pale fawn, with a white line running along their base. *Exp. al.* 28 mm. *Hindwings* and cilia shining, pale fawn-brownish. *Abdomen* dark bronzy brown. *Legs* hairy; pale fawn, with slight darker tarsal annulations.

*Type* ♂ (4713) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft. (*W. Schaus*). Unique.

### AMYDRIA Clms.

=†*AMADRIA* Chmb., †*AMADRYA* Chmb., Dyar, †*AMYDRYA* Krft.; =CASAPE Wkr.; [?=SCYROTIS Meyr.; Meyr.].

*Type 1*: *Amydria effrenatella* Clms. (†*effrentella* Clms.; Clms. 1859).

AMYDRIA Clms. Pr. Ac. Nat-Sc. Phil. **11**: 1859 260, 262, 328 (1859): Clms-Stn. Tin. N-Am. pp. vii, 37, 39, 55-6, 59, tf. 60·2 (1872); Z. Verh. ZB. Ges. Wien **23**: 1873 Abh. 219-20 (1873): Hor. Soc. Ent. Ross. **13** 205 (1877). †*AMADRIA* Chmb. Can. Ent. **6** 232 (1874). †*AMADRYA* Chmb. Cin. Qr. Jr. Sc. **2** 256-7 (1875): Bull. US. GG. Surv. **4** 128 (1878): Jr. Cin. Soc. NH. **2** 198, tf. 201·4 (1880); Btmlr. Ent. Am. **5** 37 (1889). AMYDRIA Wlsm. Pr. Z. Soc. Lond. **1891** 517, 545 no. 34 sp. 64 (1892): **1897** 167 no. 103 sp. 275 (1897). †*AMADRYA* Dyar Bull. US. Nat. Mus. **52** 573 sp. 6533-4 (1902). †*AMYDRYA* Krft., Smith's Check-List Lp. Bor-Am. 123 sp. 7070-1 (1903). AMYDRIA Busck Pr. Ent. Soc. Wash. **5** 186 (1903); Dietz Tr. Am. Ent. Soc. **31** 3, 4-12, 91 Pf. **1**·1, **3**·5 (1905); Busck Can. Ent. **38** 346, 347 (1906): Pr. US. Nat. Mus. **30** 733-4 (1906); Krft. Can. Ent. **39** 9 (1907); Meyr. Pr. Z. Soc. Lond. **1908** 752-3 (1908): Tr. Ent. Soc. Lond. **1909** 43 (1909): Ann. S-Afr. Mus. **5** 362-4 (1909): **10** 71 (1912): Ann. Transv. Mus. **3** 83 (1911), 335 (1913); Busck Ann. Rp. Laguna Mar-Lab. **1** 168 (1912).

*Type 2*: *Casape pauculella* Wkr. (Wkr. 1864).

CASAPE Wkr. Cat. Lp. BM. **29** 786 no. 73 sp. 1 (1864).

[cf. SCYROTIS Meyr. Ann. S-Afr. Mus. **5** 362, 377-8 (1909)—Type: *athleta* Meyr.]

### 1. *Amydria brevipennella* Dietz.

†*brenipeunella* Dietz.

*Amydria brevipennella* Dietz Tr. Am. Ent. Soc. **31** 5, 91, (†*brenipeunella*) 5, 96 (1905)<sup>1</sup>.

*Hab.* AMERICA, N-C. United States<sup>1</sup>—DISTRICT OF COLUMBIA<sup>1</sup>: MARYLAND<sup>1</sup>: Plummer's Id.<sup>1</sup>, V. 1906, VII-VIII. 1903 (*A. Busck*)—NORTH CAROLINA, 1883 (*H. K. Morrison*). Central America—GUATEMALA: ALTA VERA PAZ: Coban, 3800 ft., I-II. 1880 (*G. C. Champion*).

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## 2. *Amydria umbraticella* Busck.

*Amydria umbraticella* Busck Pr. US. Nat. Mus. 47 64 (1914)<sup>1</sup>.

Type ♂ ♀ (16768) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: PANAMA<sup>1</sup>: La Chorrera<sup>1</sup>; Alhajuela<sup>1</sup>; Porto Bello<sup>1</sup>; Trinidad River<sup>1</sup> (III, VI. *A. Busck*)<sup>1</sup>.

## 3. *Amydria coloradella* Dietz.

*Amydria coloradella* Dietz Tr. Am. Ent. Soc. 31 5, 6, 91 (1905)<sup>1</sup>; Busck Ann. Rp. Laguna Mar-Lab. 1 168 (1912)<sup>2</sup>.

*Hab.* AMERICA, N-C. Canada—VANCOUVER ID.: Esquimalt, 1882 (*J. J. Walker*). United States<sup>1-2</sup>—COLORADO<sup>1</sup>: LARIMER: Loveland, VII-IX. 1891 (*W. G. Smith*): ARAPAHOE<sup>1</sup>: Denver<sup>1</sup>: LAPLATA<sup>1</sup>: Durango<sup>1</sup>—ARIZONA<sup>1</sup>: PIMA<sup>1</sup>: St. Rita Mts.<sup>1</sup>—CALIFORNIA<sup>1-2</sup>: TULARE<sup>1</sup>: Kaweah<sup>1</sup>: ORANGE<sup>2</sup>: Laguna Beach<sup>2</sup>. Central America—MEXICO: DURANGO: near Durango City (*H. Becker*): VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*)—GUATEMALA: TOTONICAPAM: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*).

## 4. *Amydria muricolor*, sp. n.

*Antennae* fawn-grey. *Palpi* with a strong brush beneath, terminal joint smooth, as long as the median; pale fawn-ochreous. *Head* pale fawn-ochreous. *Thorax* vinous grey. *Forewings* pale fawn-ochreous, almost entirely suffused with vinous grey, producing an indistinct mottled appearance—perhaps slightly darker along the fold and in a series of small semiconfluent patches, on the outer half of the costa and around the apex and termen, before the base of the cloudy cinereous cilia. *Exp. al.* 17-22 mm.

*Hindwings* pale fawn-brownish; cilia whitish-cinereous. *Abdomen* vinous grey. *Legs* whitish ochreous.

Type ♂ (66840, Ciudad) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66842, 66848-9) US. Nat. Mus.]

*Hab.* MEXICO: DURANGO: Ciudad, 8100 ft. (*A. Forrer*); Milpas, 5900 ft. (*A. Forrer*). Fourteen specimens.

## 5. *Amydria clemensella* Chmb.

†*Amadria?* *clemensella* Chmb. Can. Ent. 6 232 (1874)<sup>1</sup>. †*Amadrya clemensella* Chmb. Cin. Qr. Jr. Sc. 2 257 (1875)<sup>2</sup>: Bull. US. GG. Surv. 4 128 (1878)<sup>3</sup>; Dyar Bull. US. Nat. Mus. 52 573 sp. 6533 (1902)<sup>4</sup>. †*Amydria clemensella* Krft., Smith's Check-List Bor-Am. 123 sp. 7070 (1903)<sup>5</sup>. *Amydria clemensella* Dietz Tr. Am. Ent. Soc. 31 7-8, 91 (1905)<sup>6</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-6</sup>—MISSOURI<sup>6</sup>—TEXAS<sup>1-6</sup>: BOSQUE: 22. VII., 28. IX-11. X. 1876 (*G. W. Belfrage*). Central America—MEXICO: SONORA, 1883 (*H. K. Morrison*).

## 6. *Amydria scotina*, sp. n. (Tab. X. fig. 20.)

*Antennae* pale brownish sericeous. *Palpi* roughly brush-like beneath, the naked terminal joint projecting about the length of the head beyond it; whitish cinereous, mixed with dark fuscous, of which there are two spots on the underside of the terminal joint. *Head* rough, hairy; dark fuscous. *Thorax* dark fuscous, sprinkled with whitish cinereous. *Forewings* whitish cinereous, sprinkled transversely with

dark fuscous between larger, ill-defined and partly confluent blotches of the same—of these there are four costal, one, small, near the base, the others gradually increasing in size until the fourth, which encroaches on the costal cilia and is produced on its outer edge to the termen above the tornus; others less clearly defined lie between the cell and the fold, the outer one being on the dorsum, with a smaller one at the end of the cell above and beyond it; broken shades of the same colour run through the whitish cinereous terminal and apical cilia. *Exp. al.* 16 mm. *Hindwings* and cilia greyish brown. *Abdomen* greyish brown. *Legs* pale greyish brown, the tibiae strongly hairy; the hind tarsi with four whitish cinereous annulations.

*Type* ♂ (66793) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 7. *Amydria taracta*, sp. n. (Tab. X. fig. 19.)

*Antennae* greyish brown. *Palpi* fawn-ochreous; median joint roughly clothed, tufted beneath; terminal joint nearly as long as median, smooth. *Head* and *Thorax* dark fawn-brown. *Forewings* cinereous, evenly mottled and sprinkled with dark fawn-brown and dark brownish fuscous scaling, to the almost entire obliteration of the paler ground-colour; there is no describable pattern, but the fuscous scaling tends to form an outwardly oblique band from near the base of the costa to below the fold, and another band at about one-fourth from the base, reaching nearly to the dorsum, thence tending outward, recrossing the fold and reverting to the costa before the apex; cilia brownish cinereous, mottled and sprinkled with dark fawn-brown. *Exp. al.* 19 mm. *Hindwings* and cilia greyish brown. *Legs* pale fawn-brown, the tarsi with darker annulations.

*Type* ♀ (66822) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA, SACATEPEQUEZ: Zapote, 2000 ft., V-VI. 1879 (*G. C. Champion*). Unique.

### 8. *Amydria anceps*, sp. n.

*Antennae* whitish ochreous. *Palpi* brush-like beneath, the terminal joint slender, erect, shorter than the median, but reaching as high as the base of the antennae; whitish ochreous, stained beneath with greyish fuscous. *Head* rough; whitish ochreous. *Thorax* whitish ochreous, with greyish fuscous patches on the tegulae. *Forewings* slightly widening outwardly, costa evenly arched, apex obtusely rounded, termen oblique; whitish ochreous, profusely speckled with dark umber scales, especially on the edges of a series of confluent pale mouse-grey mottlings, which, commencing at the base of the costa, dip obliquely to the fold, and thence revert to the costa at one-fourth, forming a more connected band which dips again obliquely, and is angulate on the fold, at less than half the wing-length, thence reverting to the costa beyond the middle, after throwing out an excrescence at the end of the cell; there is a costal spot half-way between the two points of contact, and a series of costal spots of the same colour, to the number of about four, on the outer half of the wing, repeated, but less distinctly, on the termen where they extend through the otherwise pale ochreous cilia. *Exp. al.* 21 mm. *Hindwings* broader than the forewings; pale brownish grey; cilia the same. *Abdomen* pale brownish grey. *Legs* whitish ochreous.

*Type* ♂ (66860, *Amula*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66861) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., IX. (*H. H. Smith*). Two specimens.

### 9. *Amydria meridionalis*, sp. n. (Tab. X. fig. 21.)

*Antennae* slightly ciliate; brownish cinereous, barred with fuscous. *Palpi* short, erect; median joint thickly tufted, terminal smooth, reaching as high as the crown; brownish cinereous, shaded with fuscous externally. *Head* and *Thorax* brownish. *Forewings* brownish cinereous, somewhat suffused with fawn-brown, blotched and speckled with dark fuscous; three spots on the basal half of the costa form the upper edge of a broken triangular patch, the apex of which crosses the cell to the fold; a similar, but

more rounded, patch occupies the end of the cell, and is connected at its inner edge with a smaller quadrangular patch crossing the fold; before the apex an obliquely elongate dark spot emits a narrow line of scales, running to the dorsum parallel with the termen; there is a dark line also around the apex and termen, including the cilia, but somewhat interrupted towards the tornus by streaks of a pale brown colour. *Exp. al.* 22 mm. *Hindwings* and cilia greyish brown, the latter tipped with pale brownish cinereous. *Abdomen* and *Legs* greyish brown; *genitalia*, uncus slender, bent over, claspers slender, very narrowly spoon-shaped.

*Type* ♂ (66857) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* COSTA RICA: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*). Unique.

### 10. *Amydria pogonites*, sp. n. (Tab. X. fig. 22.)

*Antennae* brownish cinereous; *Palpi* with long beard-like brush beneath the median joint, terminal joint short, naked, porrect; brownish fuscous externally, paler on the inner side. *Head* rough; pale brownish cinereous. *Thorax* brownish. *Forewings* short, rounded at the apex; brownish, with a strong admixture of dark purplish grey scaling, chiefly arranged in blotches on the outer half; together with this are some patches of bright ferruginous, a line of the same running along the fold from the base; four indistinct, dark brownish fuscous, costal spots beyond the middle, with a patch of the same about the tornus, the termen also shaded with dark brownish fuscous at the base of the paler cilia; there is a pale brownish cinereous patch in the commencement of the dorsal cilia, and a few scales of the same between the costal spots serve to indicate them more clearly in certain lights. *Exp. al.* 11 mm. *Hindwings* with obtusely rounded apex; dark brown, the cilia scarcely paler. *Abdomen* greyish brown, fading to brownish cinereous posteriorly. *Legs* hairy; greyish brown, the hind tarsi with pale annulations.

*Type* ♂ (66794) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 11. *Amydria margoriella* Dietz.

=†*marjorieella* Dietz, †*margorieella* Dietz, †*marjoriella* Busck.

*Amydria margoriella* Dietz Tr. Am. Ent. Soc. **31** 10, 11, (†*marjorieella*) 91, (†*margorieella*) 94, 96, Pf. **3**·5 (1905)<sup>1</sup>. *Amydria marjoriella* Busck Pr. US. Nat. Mus. **30** 733 (1906)<sup>2</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-2</sup>—FLORIDA<sup>1</sup>—KANSAS<sup>1</sup>: DOUGLAS<sup>1</sup>: Lawrence<sup>1</sup>—TEXAS<sup>1-2</sup>: SW. (*H. K. Morrison*, 1884): BEXAR<sup>1</sup>: San Antonio<sup>1</sup>: CAMERON<sup>2</sup>: Brownsville, VI. 1904 (*H. S. Barber*)<sup>2</sup>. Central America—MEXICO: GUERRERO: Tierra Colorada, 2000 ft., X. (*H. H. Smith*).

“*margoriella*”—“named after my daughter Margorie” (*Dietz, l. c.* 11).

### 12. *Amydria pauculella* Wkr.

*Casape pauculella* Wkr. Cat. Lp. BM. **29** 786 sp. 1 (1864)<sup>1</sup>.

*Antennae* pale ochreous. *Palpi* with a long brush beneath the median joint; the terminal nearly as long as the median, obtuse, slightly dilated, reaching to the level of the crown; whitish ochreous, dark greyish fuscous on the outer side of the median. *Head* and *Thorax* whitish ochreous; the former slightly roughened above. *Forewings* with the costa moderately straight, apex obtusely rounded, termen rounded, oblique; whitish ochreous, blotched with dark greyish fuscous, the number of blotches varying in different specimens—one at the base of the costa, and two others, confluent below the fold, placed obliquely in line with the one above; at one-fourth is another costal spot, more or less confluent with a second below and beyond it, placed obliquely in line with a large triangular dorsal spot before the tornus, this forming the lower extremity of a broken series, running obliquely outward across the end

of the cell to the costa (the connecting links of this series are sometimes wanting, leaving the costal and dorsal spots alone conspicuous); on the middle of the costa is a smaller spot, and around the apex and termen are sometimes a few dots of the same colour, but far less conspicuous; cilia whitish ochreous. *Exp. al.* 13-18 mm. *Hindwings* and cilia dirty brownish white. *Abdomen* very pale ochreous. *Legs* pale ochreous.

*Type* ♀ (1847:9) **BM.**; *Ctt.* (66862-4) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.** [*Htt.* (66870-4) US. Nat. Mus.]

*Hab.* AMERICA, C-S. **Central America**—COSTA RICA: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*); Rio Sucio (*H. Rogers*). **South America**<sup>1</sup>—VENEZUELA (*D. Dyson*, 1846)<sup>1</sup>.

Walker's Type is wrongly described as a ♂ —it is a ♀ with divided frenulum.

### XYLESTHIA Clms.

=†*XYLESTIA* Dyar, Krft.

*Type*: *Xylesthia pruniramiella* Clms. (Clms. 1859).

**XYLESTHIA** Clms. *Pr. Ac. Nat-Sc. Phil.* **11:1859** 259-60, 262 (1859): Clms-Stn. Tin. N-Am. pp. vii, 37, 39, 53-5 tf. 60·5 (1872); *Z. Verh. ZB. Ges. Wien* **23:1873** Abh. 217-19 (1873); *Chmb. Bull. US. GG. Surv.* **4** 166 (1878): *Jr. Cin. Soc. NH.* **2** 198 tf. 201·2 (1880); *Wlsm. Pr. Z. Soc. Lond.* **1897** 166 no. 102 sp. 274 (1897). †*XYLESTIA* Dyar *Bull. US. Nat. Mus.* **52** 569 sp. 6476 (1902); Krft., *Smith's Check-List Lp. Bor. Am.* 122 sp. 7014 (1903). *XYLESTHIA* Busck *Pr. Ent. Soc. Wash.* **5** 186 (1903); Dietz *Tr. Am. Ent. Soc.* **31** 22, 28-9, 92 Pf. 1·7 (1905); Busck *Can. Ent.* **38** 347-8 (1906).

#### 1. *Xylesthia pruniramiella* Clms.

=*clemensella* Chmb.<sup>9</sup>; =*congeminatella* Z.<sup>9</sup>; =*kearfottella* Dietz<sup>12</sup>.

*Xylesthia pruniramiella* Clms. *Pr. Ac. Nat-Sc. Phil.* **11:1859** 259-60, 262 (1859)<sup>1</sup>: Clms-Stn. Tin. N-Am. pp. vii, 37, 39, 53-5 tf. 60·5 (1872)<sup>2</sup>. *Xylesthia clemensella* Chmb. *Can. Ent.* **5** 174 (1873)<sup>3</sup>. *Xylesthia congeminatella* Z. *Verh. ZB. Ges. Wien* **23:1873** Abh. 218-9 (1873)<sup>4</sup>. *Xylesthia clemensella* Chmb. *Can. Ent.* **9** 208 (1877)<sup>5</sup>: *Bull. US. GG. Surv.* **4** 166 (1878)<sup>6</sup>: *Jr. Cin. Soc. NH.* **2** 198 tf. 201·2 (1880)<sup>7</sup>. †*Xylestia pruniramiella* Dyar *Bull. US. Nat. Mus.* **52** 569 sp. 6476 (1902)<sup>8</sup>. *Xylesthia pruniramiella* Busck *Pr. Ent. Soc. Wash.* **5** 186 (1903)<sup>9</sup>; Dietz *Tr. Am. Ent. Soc.* **31** 28-9, 92 (1905)<sup>10</sup>. *Xylesthia kearfottella* Dietz *Tr. Am. Ent. Soc.* **31** 28, 29, 92 Pf. 1·7 (1905)<sup>11</sup>. *Xylesthia pruniramiella* Busck *Can. Ent.* **38** 347-8 (1906)<sup>12</sup>.

*Hab.* AMERICA, N-C. **United States**<sup>1-12</sup>—ATLANTIC STATES<sup>8, 10</sup>—MASSACHUSETTS<sup>4</sup>: 10-23. VII<sup>4</sup>—NEW JERSEY<sup>11</sup>—PENNSYLVANIA<sup>1-2, 11</sup>: ⊕ in excrescences on branches of Plum, *hib.*—V., ex. VI<sup>1-2</sup>—DISTRICT OF COLUMBIA<sup>9</sup>—NORTH CAROLINA, 1884 (*H. K. Morrison*)—KENTUCKY<sup>3, 5, 9</sup>: ⊕ in dead Locust timber, ex. m.VI – b.VIII<sup>5</sup>—MISSOURI<sup>9</sup>—KANSAS<sup>10</sup>—ARIZONA<sup>10</sup>. **Central America**—MEXICO: SONORA, 1883 (*H. K. Morrison*).

## CHOROPLECA, nn., Drnt.

(χοροπλεκής = joining in the dance.)

= § *CYAN* Chmb.Type: *Cyane visaliella* Chmb. (Chmb. 1873).

= § *CYANE* Chmb. Can. Ent. 5 112-14 (1873): Bull. US. GG. Surv. 4 137 (1878): Jr. Cin. Soc. NH. 2 198 ff. 201-3 (1880); Riley, Smith's List Lp. Bor-Am. 96 sp. 5115 (1891); Dyar Bull. US. Nat. Mus. 52 573 sp. 6535 (1902); Krft., Smith's Check-List Lp. Bor-Am. 123 sp. 7072 (1903); Dietz Tr. Am. Ent. Soc. 31 23, 40-1, 92 Pl. 6-5 (1905); Busck Can. Ent. 38 347 (1906); ("The Dancing Moth") Swezey Rp. Exp-Stn. Hawaii. (Div. Ent.) Bull. 6 20-1 Pf. 3-6-8 (1909); Busck Pr. Ent. Soc. Wash. 12 134-5 (1912).

§ *Cyane* Chmb. is homonymous with **CYANE** C. Fldr. Verh. Kais. Leop-Carol. Deutsch. Akad. Naturf. 28 (Ein neues Lep.) 22 no. 47 (1861): Wien. Ent. Mts. 5 107-8 (1861) *Lep.*, and with § *Cyane* Adams Pr. Z. Soc. Lond. 1870 376 (1870) *Moll.*—new names are required for § *Cyane* Chmb. and § *Cyane* Adams.—Drnt.

1. *Choropleca poecilta*, sp. n.

*Antennae* smoky brown, biserrate toward apex, with a broad whitish band near the base; basal joint black. *Palpi* black on their outer sides, paler within; the median joint slightly fringed beneath, the terminal joint shorter, obtuse. *Head* rough; black, face smoky. *Thorax* white. *Forewings* white, with dark smoky brown elongate patches on costa and dorsum, the two on the costa being narrower than those on the dorsum; the first costal blotch extends from the base along the upper edge of the cell to fully one-third of the wing-length; the second costal, beginning narrowly before the middle, expands to an oblique angle beyond the end of the cell, and is succeeded by a short oblique costal streak of the same colour, between two broader streaks of white; on the dorsum, the first patch, commencing near the base, terminates in an outwardly oblique angle, opposite to the end of the first costal patch; it is separated from the second dorsal patch by a narrow oblique white band, the second patch extending to the commencement of the cilia, its outer edge sinuate, and its upper extremity caudate; a small brown spot, at the commencement of the cilia, emits a slender line to the apex, parallel with the white termen—it forms a slight angle before meeting a similar brown line, which marks the base of the costal cilia, the space before it slightly shaded with smoky ochreous; cilia smoky brownish around the apex, whitish toward the tornus. *Exp. al.* 13 mm. *Hindwings* reddish grey; cilia grey. *Abdomen* reddish grey. *Legs* grey.

Type ♂ (66629, *Amula*) Mus. Wlsm. (*Godm-Salw. Coll.*) BM. [PT. (66630) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*); *Amula*, 6000 ft., VIII. (*H. H. Smith*). Two specimens.

2. *Choropleca boviceps*, sp. n.

*Antennae* bronzy brown, the basal joint spotted with white, with four bands of white annulations alternating with dark brown bands—the first consists of seven or eight white rings; the second, of four; the third, of two; and the fourth, before the brown apex, of two or three. *Palpi* porrect, the median joint roughened beneath, brown externally, white on its inner side and at its apex, with a pecten of bristles on the outer side; terminal joint stout, obtuse, densely but smoothly clothed, white, with a brown half-ring beneath. *Head* somewhat rough; brownish cinereous. *Thorax* white, shaded with bronzy brown across the front and behind the middle. *Forewings* white, much suffused with bronzy brown, of which a large costal blotch extends across the outer half of the cell, the costa being of the same colour throughout, but intersected by about five outwardly oblique white streaks—two before the middle, and two, less widely separated and tending to converge at their points, before the costal cilia; the dorsal portion is somewhat less suffused, and exhibits three outwardly oblique streaks of dark bronzy brown—one before the middle, one at the middle, and one about the tornus; in a patch of the white ground-



colour, which succeeds the median shade, is a short dark brown length-streak accompanied by some bright yellow ochreous scaling, this is succeeded by three dark brown spots—one at the apex, partially colouring the cilia beyond it, and two on the termen, not influencing the hoary greyish terminal cilia; these dark spots are all preceded by some bright yellow-ochreous scaling, which is also to be found, although less conspicuous, around and above the two outer dorsal streaks. *Exp. al.* 14 mm. *Hindwings* at least as broad as the forewings; shining, brownish grey; cilia greyish cinereous. *Abdomen* shining, light greyish brown. *Legs* whitish, with grey hairs above the tibiae, the tarsal joints being also broadly banded with grey.

*Type* ♂ (66813) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66814) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*). Two specimens.

Greatly resembling 6535 *visaliella* Chmb., but differing in the greater extension of the dark patch at the base of the costa; in the two parallel white costal streaks before the apex being distinctly farther apart; and in the extension of the white apical dot into an elongate white marginal spot. The specimen of *visaliella* Chmb. (33756) with which this is compared is much smaller than *boviceps*; size, however, counts for little in this group, and there is a possibility that *boviceps* may be a more developed southern form of *visaliella*—but the dark blotch, beyond the middle of the forewing of *visaliella*, sends out two tooth-like excrescences on the outer side, while in *boviceps* it is found that the lower of these excrescences is detached, forming a small isolated spot.

### 3. *Choropleca germana*, sp. n.

*Antennae* white, annulate with dark bronzy fuscous. *Palpi* short, drooping, white; median joint roughly clothed, the long scales projecting laterally, a large patch of bronzy fuscous on its underside. *Head* hoary greyish. *Thorax* silvery white posteriorly, clouded in front with dark bronzy fuscous. *Forewings* silvery white, much suffused with dark bronzy fuscous, with some golden ochreous scaling intermixed, across the middle and towards the apex; three pairs of silvery white, outwardly oblique, geminated costal streaks are made conspicuous by the dark bronzy intermediate spaces, the space between the second and third pair being wider than that preceding the second; some silvery white spots around the apex and termen are also rendered somewhat conspicuous by the dark bronze, mixed with golden ochreous scales, which precedes and separates them; cilia grey, tipped with whitish along the termen. *Exp. al.* 8 mm. *Hindwings* and cilia pale, shining, bluish grey. *Abdomen* shining, dark grey. *Legs* pale greyish.

*Type* ♂ (66795) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (66796–7, 66800) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Seven specimens.

The distinctly geminate white costal streaks, in three similar pairs, separate this equally from *visaliella* Chmb. and from *boviceps* Wlsm.

### 4. *Choropleca terpsichorella* Busck.

*Cyane terpsichorella* Busck. [“*The Dancing Moth*” Swezey Rp. Exp-Stn. Hawaii. (Div. Ent.) Bull. 6 20–1 Pf. 3·6–8 (1909)<sup>1</sup>.] *Cyane terpsichorella* Busck Pr. Ent. Soc. Wash. 12 134–5 (1910)<sup>12</sup>.

*Type* ♂ (13121, *Honolulu*) US. Nat. Mus.

*Hab.* HAWAIIA<sup>1-2</sup>—OAHU<sup>1-2</sup>: Honolulu<sup>2</sup>, ⊕ in dead, or dying, leaves, bracts, *etc.*, of Sugar-cane, Pine-apple, Banana, *Pandanus*<sup>1</sup>. AMERICA, C<sup>2</sup>—Central America<sup>2</sup>.

"The genus is distinctly an American development, and in U.S. National Museum are several unpublished species from Central America. Though I as yet have not seen the present species, *Cyane terpsichorella*, from Central America, there is no doubt that it has been introduced into Hawaii from there and that it eventually will turn up in collections from the continent" (*Busck*<sup>2</sup>).

### TINEOLA HS.

Type: *Tinea bisselliella* Hml. (= *biselliella* HS. Pf. 4·30, 10·24-6; HS. 1853).

TINEOLA HS. SB. Schm. Eur. 5 7, 23, no. 17 Pf. 4·30, 10·24-6 (1853), 81 no. 17 sp. 86-9 (1854) Pf. 41·281<sup>a-b</sup> (1850), 49·341-2 (1851), Syst. Lp. 47 no. 331 sp. 86-9 (1855); Wlsm. Pr. Z. Soc. Lond. 1897 165-6 no. 100 sp. 272 (1897); Stgr-Rbl. Cat. Lp. Pal. 2 240 no. 471 sp. 4622-9 (1901); Dyar Bull. US. Nat. Mus. 52 570 sp. 6487 (1903); Dietz Tr. Am. Ent. Soc. 31 22, 71-2, 93 (1905).

#### 1. *Tineola uterella* Wlsm.

*Tineola uterella* Wlsm. Pr. Z. Soc. Lond. 1897 165-6 sp. 272 (1897)<sup>1</sup>.

Type ♂ (5497); ♀ (5495) Pará, Mus. Wlsm. BM.

*Hab.* AMERICA, C-I-S. Central America—MEXICO: VERA CRUZ: Cordova, ⊕ on walls of houses, ex. III. 1908 (*F. Knab*)—PANAMA: CANAL ZONE: Tabernilla, ⊕ XII-I, ex. III-VI. 1907 (*A. Busck*). West Indies<sup>1</sup>—ST. THOMAS<sup>1</sup>: ⊕ on trunks (*F. Gudmann*)<sup>1</sup>, ⊕ on walls (*W. von Hedemann*)<sup>1</sup>, ex. 14-24. III<sup>1</sup>. South America<sup>1</sup>—BRAZIL<sup>1</sup>: PARA<sup>1</sup>: Pará, ⊕ on walls, injurious to clothes, ex. 17. IX-14. XII. 1893 (*A. Schulz*).

Mr. Busck and Mr. Knab observed the cases of the larva of this species in Mexico and in Panama, where they were common on nearly every house—both agree that the larvae feed on dead insect-remains in spiders' webs. They would appear to be rather scavengers than injurious to clothing in Central America, but on the other hand Mr. A. Schulz noted in Pará that they were very injurious to clothing in houses.

### LIPOMERINX Wlsm.

(λείπω=to lack; μῆριγζ=a bristle.)

Type: *Lipomerinx prismatica* Wlsm. (Tab. X. fig. 23.)

*Antennae*  $\frac{2}{3}$ , simple. *Labial Palpi* ascending, median joint thickly clothed, with dense, short, compressed brush; terminal joint thickened with scales, short, deflexed. *Maxillary Palpi* folded. *Haustellum* weak. *Head* densely rough-haired. *Thorax* smooth. *Forewings* elongate, costa gently arched, apex depressed, round-pointed, termen obliquely rounded: *neuration* 12 veins, all separate; 7 to costa. *Hindwings* 1<sup>+</sup>, apex depressed, termen obliquely rounded: *neuration* 8 veins, all separate; 4 nearer to 5 than to 3. *Abdomen* rather long. *Legs*: hind tibiae long-haired above.

Allied to *Tinea* L., with which it agrees in general appearance and neurulation, but differs in the form of the palpi and in the absence of the setae at the end of the median joint, which are so characteristic of *Tinea*—it also differs in the very short, deflexed terminal joint.

**1. *Lipomerinx prismatica*, sp. n. (Tab. X. fig. 23.)**

*Antennae* and *Palpi* dark brown. *Head* dark ferruginous. *Thorax* dark brown. *Forewings* dark brown, with a dark ferruginous streak along the outer half of the cell, extending beyond it to the middle of the termen, a shade of the same colour running along the fold from the base, but not reaching the dorsum, also a slight subcostal shade near the apex—these are rendered inconspicuous by blending with the ground-colour, to which a bluish gloss is also imparted, about the terminal and dorsal portions of the wing, by numerous dots of steel-blue metallic scales (visible only with the lens); cilia bright, shining, iridescent bronze-colour, mixed along their base with tawny ferruginous and steel-blue. *Exp. al.* 15–25 mm. *Hindwings* bronzy brownish, with a faint purplish gloss; cilia pale brownish cinereous, darker along their basal third, and tipped with shining bronze about the apex. *Abdomen* brown. *Legs* brownish cinereous.

*Type* ♂ (4779, *Jalapa*) Mus. Wlsm. BM. [PTT. (6077–81, Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C-S. Central America—MEXICO: DURANGO (*A. Forrer*): VERA CRUZ: *Jalapa*, 4500 ft., 1887 (*W. Schaus*; *M. Trujillo*); OAXACA: *Salina Cruz*, 1906 (*W. Schaus*). South America—BRAZIL: ESPIRITO SANTO (*Higgins*): SAO PAULO: *Sao Paulo*, 1898 (*E. Dukinfield-Jones*); PARANA: *Castro*, 1895 (*E. Dukinfield-Jones*). Seventeen specimens.

TEGETICULA Z.

=§*PRONUBA* Riley (†*PROMIBA* Kby); =*PRODOXUS* Riley.

*Type* 1: *Pronuba yuccasella* Riley (Riley 1872; =*alba* Z., Z. 1873).

TEGETICULA Z.=§*PRONUBA* Riley *Nature* 6 444 (26. IX. 1872): *Can. Ent.* 4 182 (X. 1872): *Am. Nat.* 6 765–6 (XII. 1872); *Rp. Ins. Mo.* 5 150–60 tf. 74–5 (18. IV. 1873): *Tr. St-Louis Ac. Sc.* 3 55–64 tf. 1–2 (1873): 178–80 tf. 3 (1873); [Pkrd.] *Am. Nat.* 7 475–6 tf. 477·128–30 (1873); *Riley Am. Nat.* 7 619–23 (1873). TEGETICULA Z. *Verh. ZB. Ges. Wien* 23:1873 Abh. 232–3 (XII. 1873). §*PRONUBA* Riley *Rp. Ins. Mo.* 6 131–5 tf. 38 (1874). †*PROMIBA* Kby. *Zool. Rec.* 9:1872 380, 494 (1874). TEGETICULA Z. *Verh. ZB. Ges. Wien* 25:1875 Abh. 340–2 (1875). §*PRONUBA* Riley *Tr. St. Louis Ac. Sc.* 3 208–10 (1875): 325–6 (1876); *Boll Stett. Ent. Ztg.* 37 401–5 tf. 1–3 (1876); *Riley Rp. Ins. Mo.* 8 171 (1876); *Chmb. Bull. US. GG. Surv.* 3 122, 161 (1877): 4 121, 148 (1878); *Riley Tr. St-Louis Ac. Sc.* 3 568–73 (1878): *Stett. Ent. Ztg.* 39 377–82 (1878); *Chmb. Jr. Cin. Soc. NH.* 1 141–54 (1878); *Meehan N-Am. Ent.* 1 33–6 (1878); *Chmb. Jr. Cin. Soc. NH.* 2 198 (1880); *Riley Am. Ent.* 3 141–5, 155–6, 177–8, 182 (1880); *Hgn. Can. Ent.* 12 128–9 (1880); *Chmb. Am. Ent.* 3 177 (1880); *Riley Can. Ent.* 12 263–4 (1880): *Am. Ent.* 3 293 (1880): *US. Dp. Intr. (Ent. Com.) Bull.* 6 (Sppl. *Rp. Ins. Mo.*) 58 (1881): *Pr. Am. Assn. Adv. Sc.* 29:1880 617–39 tf. 1–6, 10 (1881); *Hgn. Zool. Anz.* 5:1882 18–21 (1882); *Meehan Pr. Am. Assn. Adv. Sc.* 30:1881 205–7 (1882); *Riley Pr. Am. Assn. Adv. Sc.* 30:1881 272 (1882): 31:1882 467–8 (1883): *Am. Nat.* 17 197 (1883); *Hulst Ent. Am.* 2 184 (1886); *Riley Ent. Am.* 2 233–6 (1887); *Hulst Ent. Am.* 2 236–8 (1887); *BIOL. CENTR.-AMER., Heter., Vol. IV., November* 1914. 3 66

Meehan Pr. Ac. Nat-Sc. Phil. **1888** 274-7 (1888); Riley Pr. Ent. Soc. Wash. **1** 150-4 (1889); US. Dp. Agr. (Div. Ent.) Ins. Life **1** 367-72 (1889); **4** 74 (1891); Riley, Smith's List Lp. Bor-Am. 97 sp. 5179-81 (1891); Rp. Mo. Bot. Gard. **3** 99-158 Pl. **34-8, 40-2** (28. V. 1892); Pr. Biol. Soc. Wash. **7** 81-104 tf. 1-9 (28. V. 1892); US. Dp. Agr. (Div. Ent.) Ins. Life **4** 358-78 tf. 57-68 (VIII. 1892); Pr. Ent. Soc. Wash. **2** 305-12 tf. 13-14, 312-5, 319 tf. 15-18 (31. XII. 1892); Smith US. Dp. Agr. (Div. Ent.) Ins. Life **5** 161-3 tf. 12 (1893); Trelease Rp. Mo. Bot. Gard. **4** 181-226 Pl. **15-23** (1893); Riley Pr. Biol. Soc. Wash. **8** 41-53 Pl. **9** (20. VI. 1893); US. Dp. Agr. (Div. Ent.) Ins. Life **5** 300-10 Pl. **2** (VII. 1893); Cqlt. Ins. Life **5** 311-14 (1893); Whitten Rp. Mo. Bot. Gard. **5** 137-8 (1894); Ins. Life **6** 376-7 (1894); Dyar Bull. US. Nat. Mus. **52** 577 sp. 6574-6 (1902); Jr. NY. Ent. Soc. **11** 102-3 (VI. 1903); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7112-15 (VIII. 1903). *TEGETICULA* Wlsm. Ent. Mo. Mag. **39** 260 (1903).  
[§*Pronuba* Riley is homonymous with **PRONUBA** Thoms. (1861) *Col.*]

Type 2: *Hyponomeuta quinquepunctella* Chmb. (= *decipiens* Riley; Riley 1880).

*Prodoxus* Riley Am. Ent. **3** 141-5, 155-6 (VI. 1880). \**PRONUBA* Boll. Stett. Ent. Zeit. **37** 401-5 tf. 1-3 (1876); Chmb. Jr. Cin. Soc. NH. **1** 141-54 tf. 153 · 1-2 (1878); Meehan N-Am. Ent. **1** 33-6 (1878); Hgn. Can. Ent. **12** 128-9 (1880). *Prodoxus* Chmb. Am. Ent. **3** 177 (1880); Riley Am. Ent. **3** 177-8, 182, 293 (1880); Can. Ent. **12** 263-4 (1880); Pr. Am. Assn. Adv. Sc. **29**: **1880** 617-39 tf. 7-9, 11-14 (1881); Am. Nat. **16** 62-3 (1882); Hgn. Zool. Anz. **5**: **1882** 18-21 (1882); Meehan Pr. Am. Assn. Adv. Sc. **30**: **1881** 205-7 (1882); Riley Pr. Am. Assn. Adv. Sc. **30**: **1881** 272 (1882); **31**: **1882** 467-8 (1883); Am. Nat. **17** 197 (1883); Riley, Smith's List Lp. Bor-Am. 97 sp. 5182-6 (1891); Rp. Mo. Bot. Gard. **3** 127-31, 134, 136, 145-53, 156-8 Pf. **38** · 4, **39**, **40** · 2°, **43** (28. V. 1892); Pr. Biol. Soc. Wash. **7** 96-9 tf. 10-16 (28. V. 1892); US. Dp. Agr. (Div. Ent.) Ins. Life **4** 371-8 tf. 69-75 (VIII. 1892); Pr. Ent. Soc. Wash. **2** 305-9, 315-19 tf. 14°, 19-21 (31. XII. 1892); Riley Pr. Biol. Soc. Wash. **8** 47-52 (20. VI. 1893); US. Dp. Agr. (Div. Ent.) Ins. Life **5** 305-10 tf. 38 (VII. 1893); Cqlt. Ins. Life **5** 311-2 (1893); Ckrl. Psyche **8** 142 (1897); Dyar Bull. US. Nat. Mus. **52** 576 sp. 6564-73 (1902); Jr. NY. Ent. Soc. **11** 103-4 (VI. 1903); Krft., Smith's Check-List Lp. N-Am. 124 sp. 7102-11 (VIII. 1903).

### 1. *Tegeticula intricata* Riley.

*Prodoxus intricatus* Riley Pr. Biol. Soc. Wash. **8** 50 (20. VI. 1893)<sup>1</sup>; US. Dp. Agr. (Div. Ent.) Ins. Life **5** 307-8 (VII. 1893)<sup>2</sup>.

Type ♂ ♀ (*Riley Coll.*).

*Hab.* MEXICO<sup>1-2</sup>: VERA CRUZ<sup>1-2</sup>: Jalapa, attached to *Yucca guatemalensis* Bkr. (*J. T. Mason*<sup>1-2</sup>; *M. Trujillo, W. Schaus*, 1895): OAXACA: Oaxaca (*W. Schaus*).

In the ♂ the dark spots, or reticulations, are extremely variable in extent and diffusion, but can usually be traced as originating in four patches along the costa, more or less produced in an outwardly oblique direction to, or toward, the dorsum, the termen being also margined with brown, including the cilia. The patches are more or less interrupted, or diffused, in different varieties, sometimes becoming almost obliterated and reduced to faint bands of scattered brown scales—sometimes confluent



along the wing-middle, and leaving the pale ground-colour in the form of diffused marginal spots. In the ♀ (of which, however, there are only four specimens in a series of considerably over a hundred) the pattern seems to be more clearly defined and consistent; a pale ochreous band, inwardly oblique from costa to flexus, sometimes partially confluent with a short dorsal streak crossing the fold; three straight costal streaks of varying lengths, sometimes followed by a spot before the apex, a spot before the tornus, and another above and beyond it, opposite to the middle of the termen. The hindwings and cilia are tawny brownish, darker in the ♀ than in the ♂.

### HYBROMA Clms.

Type: *Hybroma servulella* Clms. (Clms. 1862).

HYBROMA Clms. Pr. Ent. Soc. Phil. 1 136-7 (1862): Clms-Stn. Tin. N-Am. pp. viii, 187-8 (1872); Chmb. Bull. US. GG. Surv. 4 150 (1878); Riley, Smith's List Lp. Bor-Am. 96 sp. 5129 (1891); Dyar Bull. US. Nat. Mus. 52 574 sp. 6540 (1902); Busck Pr. Ent. Soc. Wash. 5 210 (1903); Krft., Smith's Check-List Lp. Bor-Am. 123 sp. 7078 (1903); Dietz Tr. Am. Ent. Soc. 31 23, 73-4, 93 Pf. 5·3 (1905).

#### 1. *Hybroma paedisca*, sp. n. (Tab. X. fig. 24.)

*Antennae* shining, pale yellow. *Palpi* slender, not extending beyond the frontal tuft; median joint slightly bristled at the apex; terminal short, smooth; pale yellow. *Maxillary Palpi* folded. *Head* rough; pale yellow. *Thorax* shining, pale golden yellow. *Forewings* shining, pale golden yellow, with a pale lilac suffusion, widening outward from the base of the costa, depressed and extending nearly to the dorsum about the middle of the wing and thence carried outward and upward to the apex; this lilac suffusion is profusely speckled with dark ferruginous scales, more thickly strewn beyond the middle than before it and almost entirely covering the apical portion, where the golden ground-colour is much intensified around the margins before the pale yellow terminal cilia. *Exp. al.* 13 mm. *Hindwings* shining, cupreous; cilia purplish grey. *Abdomen* brown-grey. *Legs* hairy; brownish grey, with paler spurs and tarsal joints.

Type ♀ (66802) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft. (H. H. Smith). Unique.

#### 2. *Hybroma dulica*, sp. n.

*Antennae* pale creamy ochreous. *Palpi* dependent, slender, the terminal joint shorter than the median; pale ochreous. *Head* somewhat rough; pale yellowish. *Thorax* pale yellowish. *Forewings* pale yellowish, slightly tinged with brownish ochreous along the fold and beyond the discal cell; a few groups of steel-grey scales are visible in an oblique line, from the commencement of the costal cilia to the middle of the dorsum and around the termen, also on the disc below the middle of the costa; costal and apical cilia yellowish, dorsal cilia slightly paler. *Exp. al.* 8-9 mm. *Hindwings* narrower than the forewings, widened at the base, tapering outward; shining, pale aeneous; cilia pale cinereous. *Abdomen* brownish cinereous. *Legs* pale cinereous.

Type ♂ (66810); ♀ (66811) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (66812) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa III. (H. H. Smith). Three specimens.

Differs from 6540 *servulella* Clms. in the absence of the costal and dorsal streaks, which are reduced to slight spots at the outer ends of what should be their positions.



## MONOPIS Hb.

=BLABOPHANES Z.; =HYALOSPILA HS.; =RHITIA Wkr.

Type 1: *Tinea rusticella* Hb. (Hb. 1826).

MONOPIS Hb. Verz. Schm. 401 sp. 3876 (1826); HS. SB. Schm. Eur. 5 7, 23 no. 13 Pf. X·14 (1853), 79, no. 13 sp. 82 (1854); 6 Syst. Lp. Eur. 47 no. 327 sp. 82 (1855). *HYALOSPILA* HS. SB. Schm. Eur. 6 Microlep. p. v Pf. X·14 (1853). MONOPIS Meyr. HB. Br. Lp. 709, 783-5 no. 39 sp. 1-5 (1895); Stgr-Rbl. Cat. Lp. Pal. 2 236 no. 464 sp. 4529-37 (1901); Dyar Bull. US. Nat. Mus. 52 570 sp. 6488-90 (1902); Dietz Tr. Am. Ent. Soc. 31 22, 30-4, 92 (1905).

[*HYALOSPILA* HS. is omitted by Scudder—§*Hyalospila* Rgt. (1888) *Lep.*, and §*Hyalospila* Wrn. (1894) *Lep.* are homonyms.]

Type 2: *Tinea ferruginella* Hb. (HS. 1853).

*TINEA* L. (I. BLABOPHANES Z.) Z. Linn. Ent. 6 100, 103-14 no. 2 A. sp. 1-5 (1852). BLABOPHANES HS. SB. Schm. Eur. 5 7, 22 no. 12 Pf. X·13 (1853), 79 no. 12 sp. 79-81 (1854); 6 Syst. Lp. Eur. 47 no. 326 sp. 79-81 (1855); Stgr-Wk. Cat. Lp. Eur. 268-9 no. 150 sp. 1365-71 (1871); Meyr. Pr. Linn. Soc. NSW. 17 (2 s. 7:1892) 481, 526-9 no. 14 sp. 68-71 (1893).

Type 3: *Rhitia congestella* Wkr. (Wkr. 1864).

RHITIA Wkr. Cat. Lp. BM. 29 818-9 no. 112 sp. 1 (1864).

1. *Monopis impressipennella* Blmk.

*Ornix impressipennella* Bilimek Verh. ZB. Ges. Wien 17:1867 Abh. 903 (1867)<sup>1</sup>.

“Alis cinereo-flavis, sericantibus, macula obscura impressis. Long. 3<sup>mm</sup>.; lat. 8<sup>mm</sup>.”

Farbe graugelb, seidenartig glänzend; Kopf mit einem Federschopf; Fühler 1½ mal so lang als der Leib; alle Flügel schmal, gewimpert, länger als der Leib; im zweiten Drittel der Flügellänge ein dunkel erscheinender Längseindruck. Beine lang, schwach gebaut.

An Stalagmitenwänden in der Höhle Cacahuamilpa in Mexico sitzend und auch in dem Spinnengewebe von *Pholcus cordatus* Blmk. hängend gefunden.”

*Hab.* MEXICO<sup>1</sup>: MORELOS<sup>1</sup>: Cueva Cacahuamilpa (*D. Bilimek*)<sup>1</sup>.

It would seem that the rough head, and the Forewings with “ein dunkel einscheinender Längseindruck” could only indicate some species of *Monopis*—perhaps *crocicapitella* Clms.

## TINEA L.

=BROSIS Hb.; =SES Hb.; =DIAPHTHIRUSA Hb.; =AUTOSSES Hb.

Type 1: *Phalaena Tinea pellionella* L. (F. 1775; Lmk. 1801).

PHALAEANA TINEAE (TINEA) L. Syst. Nat. (ed. 10) 1 496, 534-42 no. 6 sp. 234-99 (1758). SES Hb. Tent. 2 (1806). AUTOSSES Hb. Verz. Schm. 401 sp. 3869-70 (1826). TINEA Z. Stett. Ent. Ztg. 24 142-5 Pf. 2·4-6 (1863); F. & R. Reise Nov. Zool-Lp. 2 Pf. 139·2

(1875); Z. Hor. Soc. Ent. Ross. **13** 208-20 sp. 1-7 (1877); Chmb. Bull. US. GG. Surv. **4** 163-5 (1878); Wlsm. & Drnt. Ent. Mo. Mag. **33** 40-1 (1897); Stgr-Rbl. Cat. Lp. Pal. **2** 236-9 no. 466 sp. 4540-4609 (1901); Dyar Bull. US. Nat. Mus. **52** 570-3 sp. 6491-6531 (1902); Dietz Tr. Am. Ent. Soc. **31** 22, 44-70, 92-3 Pf. **2** 2-3, 5-7, **3** 1-2, 4, 6-7 (1905); Wlsm. Fn. Haw. **1** 729, 754 no. 60 sp. 439 (1907); Pr. Z. Soc. Lond. **1907** 1022-6 no. 81 sp. 162-8 Pl. **53** 17 (1908); Meyr. Tr. Ent. Soc. Lond. **1909** 42-3 (1909); Busck Pr. US. Nat. Mus. **40** 229 (1911).

Type 2: *Phalaena Tinea granella* L. (Hb. 1806).

BROSIS Hb. Tent. 2 (1806). *DIAPHTHIRUSA* Hb. Verz. Schm. 404 sp. 3890 (1826).

### 1. *Tinea fuscipunctella* Hw.

*Tinea fuscipunctella* Hw. Lp. Br. 562 sp. 4 (1828)<sup>1</sup>; Stgr-Rbl. Cat. Lp. Pal. **2** 238 sp. 4583 (1901)<sup>2</sup>; Dyar Bull. US. Nat. Mus. **52** 571 sp. 6503 (1902)<sup>3</sup>; Dietz Tr. Am. Ent. Soc. **31** 44, 45, 47 (1905)<sup>4</sup>; Wlsm. Pr. Z. Soc. Lond. **1907** 1023-4 sp. 164 (1908)<sup>5</sup>.

*Hab.* EUROPE<sup>1-5</sup>. ASIA<sup>2,5</sup>. AFRICA<sup>2,5</sup>. AMERICA, N-C. Canada<sup>2-3</sup>. United States<sup>3-5</sup>. Central America—MEXICO: DURANGO: near Durango City (*H. Becker*). HAWAIIA<sup>5</sup>. AUSTRALIA<sup>5</sup>. NEW ZEALAND<sup>5</sup>.

### 2. *Tinea dissimilis*, sp. n.

*Abdomen* brown. *Labial Palpi* slender, dependent, with two or three bristles; pale brownish. *Maxillary Palpi* folded. *Head* rough; ferruginous. *Thorax* brown. *Forewings* brownish ochreous, almost entirely suffused with dark ferruginous brown, mixed with dark fuscous scaling; there is no clearly distinguishable pattern, but the dark fuscous colour is chiefly noticeable in a wavy line extending from the middle of the cell to the apex, well-marked at its commencement, well-marked also at the end of the cell, and beyond it in the apical shade—there is a small spot also in the fold, a little beyond the commencement of the dark shade above it; cilia pale brownish ochreous, the dorsum below the fold less suffused than the remainder of the wing. *Exp. al.* 12 mm. *Hindwings* dark purplish grey, becoming shining cupreous toward the apex; cilia dark grey. *Abdomen* dark brownish grey. *Legs* ochreous, much shaded with brownish fuscous.

*Type* ♀ (66858) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66859) US. Nat. Mus.]

*Hab.* GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., 1880. (*G. C. Champion*).  
Two specimens.

### 3. *Tinea nigripalpis*, sp. n.

*Antennae* simple; bronzy grey. *Labial Palpi* blackish—very short, not projecting beyond the frontal tuft. *Maxillary Palpi* folded. *Head* rough; yellowish white. *Thorax* white; tegulae shaded with brown-grey. *Forewings* bone-white, with slight brown-grey shading toward the base, on and beneath the costa, and across the wing at two-thirds, as well as round the apex and termen; four darker elongate spots, two below the fold and two on the cell, are arranged in diamond-form at equal distances, the outer point of the figure being at the end of the cell, its upper angle preceding its lower one; cilia bone-white, with two brown-grey shade-lines running through them. *Exp. al.* 9-10 mm. *Hindwings* and cilia shining, pale brassy greyish. *Abdomen* pale brownish ochreous. *Legs* shining, pale brassy grey; hind tibiae very hairy, tarsi spotted with dark fuscous.

*Type* ♂ (66803) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66805) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Three specimens.

## DYSOPTUS Wlsm.

(δύσοπτος=hard to see.)

Type: *Dysoptus probata* Wlsm. (Tab. X. fig. 25.)

*Antennae* (♀)  $\frac{1}{3}$ , serrate and shortly biciliate. *Labial Palpi* stout, recurved nearly to the vertex; basal joint well-developed, median as long as terminal—all closely clothed beneath. *Maxillary Palpi* and *Haustellum* obsolete. *Head* and face smooth, somewhat loosely scaled. *Thorax* smooth. *Forewings* rather broad, rounded at apex, termen oblique, tornus rounded: *neuration* 11 veins (10 absent); 7 to costa; 8-9 stalked, rest separate. *Hindwings* 1, termen obliquely rounded: *neuration* 8 veins, all separate. *Abdomen* (♀) rather stout, with long silky clothing on anal segments. *Legs* (broken).

This species appears to be allied to *Lampronia* Stph., from which it differs in the absence of the haustellum and labial palpi, and also in having but eleven veins in the forewings, 8-9 being stalked. *Dysoptus* agrees with *Greya* Busck in having only eleven veins, but differs in 7-8 being stalked and also in its smooth head.

1. *Dysoptus probata*, sp. n. (Tab. X. fig. 25.)

*Antennae* and *Palpi* dull ochreous. *Head* brownish ochreous. *Forewings* testaceous, with a strong lilac gloss and several washed-out pale whitish ochreous spots and specks; a small one on the upper edge near the base, a larger one, before the middle of the costa, reduplicated obliquely outward beneath in the direction of a larger discal spot of the same colour near the end of the cell—this crosses the cell, another spot occurring below it slightly nearer to the base; a little beyond the cell a series of small obscure spots is curved outward and backward nearly to the outer extremity of the fold; halfway between the medio-costal spot and the apex is another small costal spot, while below and beyond it, opposite to the apex between veins 6 and 7, is another spot; an elongate triangular streak lies on the middle of the termen, the cilia opposite to it being of the same pale colour, as are also those at the extreme apex—except for these two patches the cilia partake of the darker ground-colour of the wings. *Exp. al.* 16 mm. *Hindwings* almost exactly the same colour as the forewings, although in some lights they appear a little browner, these are also speckled with pale whitish ochreous, a semicircle of spots occurring beyond the end of the cell and an ante-apical spot between veins 6 and 7; cilia concolorous with the wing, with two pale patches on either side of the apex corresponding with those of the forewings. *Abdomen* testaceous, the anal tuft densely hairy.

Type ♀ (66854) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000-5000 ft., 1884 (*G. C. Champion*). Unique.

## DIATAGA, gen. n.

(διατάγη=arrangement.)

Type: *Diataga leptosceles* Wlsm. (Tab. X. fig. 26.)

*Antennae*  $\frac{1}{2}+$ , ♂ biciliate 2; basal joint enlarged, with strong pecten. *Labial Palpi* roughly clothed with projecting scales on the median joint; terminal joint laterally compressed, short, obtuse, smooth. *Maxillary Palpi* long, folded, coarsely scaled. *Haustellum* rather short. *Ocelli* absent. *Head* roughly clothed with long hair-scales. *Thorax* evenly clothed. *Forewings* narrow, elongate, the costa raised beyond the middle, thence again depressed to an evenly rounded apex, termen obliquely rounded: *neuration* 12 veins; 8-9 stalked; 10 approximate to 9; 7 to apex; 4-5 stalked; 3 from angle, 2 remote; 1 basally furcate. *Hindwings* 1<sup>+</sup>, apex rounded, termen very obliquely convex, tornus scarcely indicated: *neuration* 8 veins, all separate, 5 nearer to 6 than to 4. *Abdomen* moderate. *Legs*: hind tibiae and tarsi long and slender, the tibiae roughly clothed above.

A conspicuous genus, easily recognised.

1. *Diataga leptosceles*, sp. n. (Tab. X. fig. 26.)

*Antennae* pale buff-ochreous. *Palpi* pale buff-ochreous, shaded on their outer side with umber-brown, except on the terminal joint. *Head* pale buff-ochreous. *Thorax* umber-brown, with some paler ochreous scaling. *Forewings* umber-brown, transversely speckled with darker scales, leaving an elongate pale ochreous patch on the middle of the costa, and a second one, situated beyond the raised area of the costa, sometimes broken on its outer half—there is also a small ochreous spot before the apex; cilia with a pale ochreous line along their base, profusely shaded with umber-brown. *Exp. al.* 18–33 mm. *Hindwings* greyish brown, with a slight aeneous tinge, contrasting slightly with the forewings, and in some lights exhibiting a tendency to purple; cilia rather shining, stone-grey. *Abdomen* umber-brown. *Legs* whitish ochreous, the tibiae umber-brown along their upper and under sides, the spurs also touched with umber-brown outwardly.

*Type* ♂ (6451); ♀ (4620) *Jalapa*, Mus. Wlsm. BM. [*PTT.* (941 Wlsm. Det. 1894) Mus. J. de Joannis; (6075 Wlsm. Det. 1908) US. Nat. Mus.]

*Hab.* AMERICA, C-S-I. Central America—MEXICO: VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*). South America—FRENCH GUIANA: St. Lawrence, Rio Maroni, XI. 1906 (*E. Le Moult*)—ECUADOR (*Mus. Joannis*). West Indies—TRINIDAD: VI. 1905 (*A. Busck*). Eight specimens.

## Fam. 21. ACROLOPHIDAE.

## ACROLOPHUS Poey.

= ANAPHORA Clms.; († *ANOPHORA* Krft.); = DERCHIS Wkr.; = HIBITA Wkr.; = TIRASIA Wkr.; = § *EDDARA* Wkr.; = BAZIRA Wkr.; = TACHASARA Wkr.; = § *EUTHECA* Grt.; = EULEPISTE Wlsm.; = PSEUDOCNCHYLIS Wlsm.; = NEOLOPHUS Wlsm.; = HYPOCLOPUS Wlsm. († *HYPOCOLPUS* Dyar); = THYSANOSCELIS Wlsm. († *THYSANOSKELIS* Wlsm.; † *THYSANOSEDES* Druce); = § *ANKISTROPHORUS* Wlsm.; = CAENOGENES Wlsm.; = FELDERIA Wlsm.; = ORTHOLOPHUS Wlsm.; = PSEUDANAPHORA Wlsm.; = HOMONYMUS Wlsm.; = SAPINELLA Kby.; = ATOPOCERA Wlsm.; = PILANOPHORA Wlsm.

Type 1: *Acrolophus vitellus* Poey (Poey 1832).

ACROLOPHUS Poey Cent. Lp. Cuba [pp. 51–3 no. 20 Pl. 20] (1832); F. & R. Reise Nov. Zool-Lp. 2 Pf. 139–35 (1875); Z. Hor. Soc. Ent. Ross. 13 197 (1877); Gndl. Contr. Ent. Cuba 1 440 (1881); Mschlr. Verh. ZB. Ges. Wien 31:1881 438 sp. 138 Pf. 18–46 (1882); Wlsm. Tr. Am. Ent. Soc. 10 167–9 (1882); Tr. Ent. Soc. Lond. 1887 137–8, 140–1, 147–54 Pf. 7–5–10 (1887); Btmlr. Ent. Am. 3 139–40 (1887); Frnld. Ent. Am. 3 196 (1887); Btmlr. Ent. Am. 4 29 (1888); Riley US. Dp. Agr. (Div. Ent.) Ins. Life 1 195 (1888); Mschlr. Ab. Senck. Nat. Ges. 16 336 sp. 595–6, 354 no. 402 sp. 908–9 (1890); Riley, Smith's List Lp. Bor-Am. 94–5 sp. 5047–58 (1891); Wlsm. Pr. Z. Soc. Lond. 1891 512–4, 544 no. 29 sp. 50–5 Pf. 41–11–13 (1892); 1897 173–4 no. 115 sp. 294–300 (1897); Dyar Can. Ent. 32 306, 308–9 (1900); Druce Ann-Mag. NH. (7 s.) 7 441–2 (1901); Dyar Bull. US. Nat. Mus. 52 578 sp. 6584–9 (1902); Busck Pr. Ent. Soc. Wash. 5 186–7 (1903); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7124–9 (1903); Busck Pr. Ent. Soc. Wash. 11:1909 186–7 (1909); Rp. Laguna Mar-Lab. 1 168–9 (1912); Pr. Ent. Soc. Wash. 14:1912 184–5, 222–4 (1912); Meyr. Tr. Ent. Soc. Lond. 1913 191–9 (1913); Busck Ins. Insc. Mens. 1 142–3 (1913); Pr. US. Nat. Mus. 47 66–7 (1914).

Poey wrote [Cent. Lp. Cuba (pp. 52–3) (1832)] “C'est pour Hübner le genre *Pinaris*, que

j'aurais adopté volontiers s'il avait été fondés sur les palpes, et non sur les couleurs de l'insecte; on peut voir par son Catalogue des Lépidoptères connus" [*i. e.* 'Verzeichniss bekannter Schmettlinge'] "que la plupart de ses *Pinaris* ont les palpes courts et de forme ordinaire." Poey considered *hamiferella* Hb. congeneric with *vitellus* Poey, and pointed out that the other species differ in their palpi—this must be taken as a definite removal of *hamiferella* Hb. to *Acrolophus* Poey, and a restriction of *Pinaris* Hb. to *laterella* S-D. (= *\*heraclella* Hb. Tin. 417) and its allies in the Verzeichniss (411 sp. 3961–72), in which list *hamiferella* Hb. is not included. *Tinea arenella* S-D. has been cited as the Type of *Pinaris* Hb. [Wlsm. Pr. Z. Soc. Lond. 1907 955 no. 31 (1908)], but it will now be well to avoid future change by adopting *Tinea laterella* S-D. (= *\*heraclella* Hb. 417; *\*heraceliella* Hb. Verz. 3968) as the Type of *Pinaris* Hb., and to sink definitely under *Pinaris* Hb. (1825) *Agonopteryx* Hb. (1826) and its synonyms (*ante* pp. 135–6).

Type 2: *Anaphora popeanella* Clms. (Wlsm. 1887).

ANAPHORA Clms. Pr. Ac. Nat. Sc. Phil. 11:1859 260–2 (1859); Clms-Stn. Tin. N-Am. pp. vii, 37, 39, 56–9 ff. 60·3–4 (1872); Wkr. Cat. Lp. BM. 30 1010 sp. 1–3 (1863); Grt. Can. Ent. 4 136–8, 142–3 (1872); Z. Verh. ZB. Ges. Wien 23:1873 Abh. 214–7 sp. 1–2 (1873); ⊕ Mrtf. Can. Ent. 8 185–6 (1876); Z. Hor. Soc. Ent. Ross. 13 196–8 sp. 1–2 (1877); Chmb. Bull. US. GG. Surv. 4 79, 128–9 (1878); Wlsm. Tr. Am. Ent. Soc. 10 167–8 (1882); Grt. Can. Ent. 18 199 (1886); Wlsm. Tr. Ent. Soc. Lond. 1887 137–8, 140–1, 155–65 Pf. 8·11–19 (1887); Frnld. Ent. Am. 3 195 (1887); Riley US. Dp. Agr. (Div. Ent.) Ins. Life 1 195 (1888); ⊕ 3 27–8 (1890); Mschr. Ab. Senck. Nat. Ges. 16 337 sp. 598, 354 no. 404 sp. 911 (1890); Riley, Smith's List Lp. Bor-Am. 95 sp. 5059–63 (1891); Wlsm. Pr. Z. Soc. Lond. 1891 515–6, 545 no. 31 sp. 58–61 Pf. 41·14 (1892); 1897 172–3 no. 114 sp. 289–93 (1897); Dyar Can. Ent. 32 306, 309, 326–7 (1900); Druce Ann-Mag. NH. (7 s.) 7 442–3 (1901); Dyar Bull. US. Nat. Mus. 52 578–9 sp. 6591–6 (1902); Busck Pr. Ent. Soc. Wash. 5 186–7 (1903). †ANAPHORA Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7131–6 (1903). ANAPHORA Dyar Jr. NY. Ent. Soc. 15:1907 52–3 (1907). ACROLOPHUS Meyr. Tr. Ent. Soc. Lond. 1913 191–2 (1913).

Type 3: *Derchis horridalis* Wkr. (Wkr. 1863).

DERCHIS Wkr. Cat. Lp. BM. 27 7–8 no. 10 sp. 1 (1863).

Type 4: *Hibita arcturella* Wkr. (Wkr. 1863).

HIBITA Wkr. Cat. Lp. BM. 27 10 no. 14 sp. 1 (1863).

Type 5: *Tirasia granulatella* Wkr. (Wkr. 1863).

TIRASIA Wkr. Cat. Lp. BM. 28 512–3 no. 28 sp. 1 (1863); Wlsm. Tr. Ent. Soc. Lond. 1887 137 (1887).

Type 6: *Eddara xylinella* Wkr. (Wkr. 1864).

BAZIRA Wkr. = § *EDDARA* Wkr. Cat. Lp. BM. 28 517–8 no. 33 sp. 1 (1863). BAZIRA (nn.) Wkr. Cat. Lp. BM. 30 1009 (1864). § *EDDARA* Wlsm. Tr. Ent. Soc. Lond. 1887 137 (1887). BAZIRA Wlsm. Pr. Z. Soc. Lond. 1891 516, 545 no. 33 sp. 63 (1892); 1897 175 no. 117 sp. 302 (1897). ACROLOPHUS Meyr. Tr. Ent. Soc. Lond. 1913 191–2 (1913).

[§ *Eddara* Wkr. (1863) *Lep.* is homonymous with *EDDARA* Wkr. (1858) *Hemipt.*]

Type 7: *Tachasara languidalis* Wkr. (Wkr. 1865).

TACHASARA Wkr. Cat. Lp. BM. 34 1151 (1865).



Type 8: *Eulepiste cressoni* Wlsm. (Wlsm. 1882).

*EULEPISTE* Wlsm. Tr. Am. Ent. Soc. **10** 169-70 (1882); Tr. Ent. Soc. Lond. **1887** 140, 142-3 Pf. **7** · 1<sup>c-d</sup> (1887); Frnld. Ent. Am. **3** 195 (1887); Riley US. Dp. Agr. (Div. Ent.) Ins. Life **1** 195 (1888); Riley, Smith's List Lp. Bor-Am. 94 sp. 5044-5 (1891); Wlsm. Pr. Z. Soc. Lond. **1891** 511, 544 no. 28 sp. 49 Pf. **41** · 10 (1892); **1897** 170 no. 111 sp. 286 (1897); Dyar Can. Ent. **32** 306-7 (1900); Bull. US. Nat. Mus. **52** 577 sp. 6579-81 (1902); Can. Ent. **35** 76 (1903); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7118-21 (1903). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 9: *Pseudoconchylis laticapitana* Wlsm. (Wlsm. 1884).

*PSEUDOCONCHYLIS* Wlsm. Tr. Ent. Soc. Lond. **1884** 133 (1884); Frnld., Smith's List Lp. Bor-Am. 90 sp. 4770 (1891); Dyar Bull. US. Nat. Mus. **52** 488 sp. 5469 (1902); Krft., Smith's Check-List Lp. Bor-Am. 107 sp. 5889 (1903); Busck Jr. NY. Ent. Soc. **15**: **1907** 20 (1907); Frnld. Gn. Tortr. 45, 61 (1908).

Type 10: *Neolophus furcatus* Wlsm. (Wlsm. 1887).

*NEOLOPHUS* Wlsm. Tr. Ent. Soc. Lond. **1887** 140, 141-2 Pf. **7** · 1<sup>a-b</sup> (1887); Frnld. Ent. Am. **3** 195 (1887); Riley US. Dp. Agr. (Div. Ent.) Ins. Life **1** 195 (1888); Riley, Smith's List Lp. Bor-Am. 94 sp. 5043 (1891); Dyar Can. Ent. **32** 306, 327 (1900); Bull. US. Nat. Mus. **52** 577 sp. 6577-8 (1902); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7116-7 (1903). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 11: *Hypoclopus griseus* Wlsm. (Wlsm. 1887).

*HYPOCLOPUS* Wlsm. Tr. Ent. Soc. Lond. **1887** 140, 144-5 Pf. **7** · 2, · 2<sup>a</sup> · 2<sup>b</sup> (1887); Frnld. Ent. Am. **3** 196 (1887); Riley US. Dp. Agr. (Div. Ent.) Ins. Life **1** 195 (1888); Riley, Smith's List Lp. Bor-Am. 94 sp. 5046 (1891); Wlsm. Pr. Z. Soc. Lond. **1897** 55, 170 no. 110 sp. 285 (1897); Dyar Can. Ent. **32** 306, 307-8 (1900). †*HYPOCLOPUS* Dyar Bull. US. Nat. Mus. **52** 577 sp. 6582 (1902); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7122-3 (1903). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 12: *Thysanoscelis hirsutus* Wlsm. (Wlsm. 1887).

*THYSANOSCELIS* Wlsm. = †*THYSANOSCELIS* Wlsm. Tr. Ent. Soc. Lond. **1887** 140 (1887). *THYSANOSCELIS* Wlsm. Tr. Ent. Soc. Lond. **1887** 145-6 Pf. **7** · 3, · 3<sup>a-c</sup> (1887). †*THYSANOSCELIS* Frnld. Ent. Am. **3** 195 (1887); Dyar Can. Ent. **32** 306 (1900). †*THYSANOSCEDES* Druce Ann-Mag. NH. (7 s.) **7** 441 (1901). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 13: *Caenogenes perrensella* Wlsm. (Wlsm. 1887).

*CAENOGENES* Wlsm. Tr. Ent. Soc. Lond. **1887** 140, 154-5 Pf. **7** · X, · X<sup>a</sup> (1887); Frnld. Ent. Am. **3** 195 (1887); Mschr. Ab. Senck. Nat. Ges. **16** 337 sp. 597, 354 no. 403 sp. 910 (1890); Wlsm. Pr. Z. Soc. Lond. **1891** 514-5, 544 no. 30 sp. 56-7 (1892); **1897** 170 no. 109 sp. 284 (1897); Dyar Can. Ent. **32** 306 (1900). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 14: *Acrolophus cossoides* F. & R. (Wlsm. 1887).

*FELDERIA* Wlsm. Tr. Ent. Soc. Lond. **1887** 140, 165-8 Pf. **8** · 20, · 20<sup>a-b</sup>, · XX, · XX<sup>a</sup>, · 21, · 22, 22<sup>a</sup>, · 23 (1887); Frnld. Ent. Am. **3** 195 (1887); Riley US. Dp. Agr. (Div. Ent.) Ins. Life **1** 195 (1888); Riley, Smith's List Lp. Bor-Am. 95 sp. 5064 (1891); Wlsm. Pr. Z. Soc. Lond. **1891** 516, 545 no. 32 sp. 62 Pf. **41** · 15 (1902); **1897** 171 no. 112 sp. 287 (1897); Dyar Can. BIOL. CENTR.-AMER., Heter., Vol. IV., November 1914. 3 cc

Ent. **32** 306, 309-10, 328 (1900); Druce Ann-Mag. NH. (7 s.) **7** 443-4 (1901); Dyar Bull. US. Nat. Mus. **52** 579 sp. 6599-600 (1902); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7139-40 (1903); Dyar Jr. NY. Ent. Soc. **15**:1907 53 (1907). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 15: *Ortholophus variabilis* Wlsm. (Wlsm. 1887).

*ORTHOLOPHUS* Wlsm. Tr. Ent. Soc. Lond. **1887** 140, 169-70 Pf. **8**·24, ·24<sup>a-c</sup> (1887); Frnld. Ent. Am. **3** 195 (1887); Btmlr. Ent. Am. **4** 29 (1888); Riley US. Dp. Agr. (Div. Ent.) Ins. Life **1** 195 (1888): Riley, Smith's List Lp. Bor-Am. 95 sp. 5065 (1891); Dyar Can. Ent. **32** 306, 310, 327 (1900): Bull. US. Nat. Mus. **52** 579 sp. 6597-8 (1902); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7137-8 (1903). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 16: *Anaphora arcanella* Clms. (Wlsm. 1887).

*PSEUDANAPHORA* Wlsm. Tr. Ent. Soc. Lond. **1887** 140, 156, 170-1 Pf. **8**·25 (1887); Frnld. Ent. Am. **3** 195 (1887); Btmlr. Ent. Am. **4** 29 (1888); Riley US. Dp. Agr. (Div. Ent.) Ins. Life **1** 195 (1888): Riley, Smith's List Lp. Bor-Am. 95 sp. 5066 (1891); Wlsm. Pr. Z. Soc. Lond. **1897** 174-5 no. 116 sp. 301 (1897); Dyar Can. Ent. **32** 306, 310-11 (1900): Bull. US. Nat. Mus. **52** 579 sp. 6601-3 (1902); Busck Pr. Ent. Soc. Wash. **5** 187 (1903); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7141-3 (1902); Dyar Can. Ent. **35** 76 (1903). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 17: §*Ankistrophorus corrientis* Wlsm. (Wlsm. 1887).

*HOMONYMUS* Wlsm. = §*ANKISTROPHORUS* Wlsm. Tr. Ent. Soc. Lond. **1887** 140, 146-7 Pf. **7**·4, ·4<sup>a-b</sup> (1887). *HOMONYMUS* (nn.) Wlsm. Pr. Ent. Soc. Lond. **1887** p. liv (1887). §*ANKISTROPHORUS* Frnld. Ent. Am. **3** 195 (1887); Dyar Can. Ent. **32** 306 (1900); Druce Ann-Mag. NH. (7 s.) **7** 441 (1901). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

[§*Ankistrophorus* Wlsm. was regarded as homonymous with *ANCISTROPHORA* Schin. (1865) *Dipt.*, and *Homonymus* Wlsm. proposed to replace it.]

Type 18: §*Eutheca mora* Grt. (Grt. 1881; Kby. 1892).

*SAPINELLA* Kby. = §*EUTHECA* Grt. Bull. US. GG. Surv. **6** 257-8 (1881). *SAPINELLA* (nn.) Kby. Cat. Lp-Het. **1** 524 no. 45 sp. 1 (1892). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

[§*Eutheca* Grt. is homonymous with *EUTHECA* Kiesenw. (1877) *Col.*, and Baly (1878) *Col.*]

Type 19: *Atopocera occultum* Wlsm. (Wlsm. 1897).

*ATOPOCERA* Wlsm. Pr. Z. Soc. Lond. **1897** 169 no. 108 sp. 283 (1897); Dyar Can. Ent. **32** 306, 326 (1900): Bull. US. Nat. Mus. **52** 578 sp. 6590 (1902); Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7130 (1903). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Type 20: *Pilanaphora hedemanni* Wlsm. (Wlsm. 1897).

*PILANAPHORA* Wlsm. Pr. Z. Soc. Lond. **1897** 171-2 no. 113 sp. 288 (1897); Dyar Can. Ent. **32** 306 (1900). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. **1913** 191-2 (1913).

Twenty-seven years ago I published "A Revision of the Genera *Acrolophus* Poey and *Anaphora* Clem." [Tr. Ent. Soc. Lond. **1887** 137-173 Pl. **7-8** (1887)], defining thirteen

genera, and have since described two more genera as new—these have been generally accepted and maintained, after further study, by Fernald, Beutenmüller, Druce, and Dyar. With a very large accession of material before us it became necessary closely to examine all doubtful cases and to verify the special points which had been relied upon in distinguishing the numerous genera established in what has been regarded as a fairly well-defined family. We approached the subject with a very keen desire not only to maintain these divisions but, if possible, to find within the group such characters as would justify their further sub-division, and it was only after a prolonged struggle on these lines that we were obliged to admit that there could not be found any character, or combination of characters, on which these genera, or any one of them, could be maintained in such manner as to be made recognisable either by figure or description. The intermediate variations were so numerous and so gradual that, apart from the question of the value of secondary sexual characters, which has been consistently discounted in this paper and the uselessness of which was very specially illustrated in this particular group, we were driven to seek for differences in neururation after all other means of distinguishing the genera had been found unreliable. Here, as in other respects, the disappointment was great. We found that these Acrolophids were in such an evidently plastic condition that even in the same species, and in some cases on the two sides of the same specimen, the apical veins, whether 7 and 8, or 8 and 9, were either forked, connate, or separate, apparently without any controlling rule or fixity of purpose. We were somewhat prepared to find the apical veins variable in this respect, and it was not until the position of the internal veins of the cell (medial and radial) had been carefully studied, in relation to the point of origin of the apical veins running to the costa and termen, that we were forced to abandon any attempt to define the particular series to which veins 7 and 8 should be assigned. This was found to be fairly consistent up to a certain point, and for some time we felt justified in retaining the genus *Caenogenes*, upon the ground that 7 and 8 were stalked from below the internal radial, but even this distinction ultimately broke down, and in one species *forreri* we found that vein 8 was sometimes stalked with 7, sometimes stalked with 9, sometimes separate from both, and at other times connected with either in varying degrees, moreover 7+8 originated sometimes from below and sometimes from above the internal radial. In one specimen of another species, *cleptica* (♂ 66895), not only 7 and 8, but 9 and 10 also were distinctly stalked.

Therefore, much against our united inclination and efforts, it has been necessary to regard the so-called *Acrolophidae* (with two exceptions) as one large genus, and to rely upon such differences, as had hitherto been regarded of generic value, for the purpose only of separating the very numerous species within it—the form of the genital segments will be found at least as useful for that purpose as any other character.

After dismissing the attempt to found any separate genera on the radial neururation of the forewings, it may yet be doubtful whether the cubital veins do not afford reliable

characters for such separation. In two species only have we found veins 2-3 of the forewings stalked. These two species differ in their radial neurulation, and although the long recurved and hirsute palpi of the ♂♂ are characteristic of *Acrolophus*, it seems desirable, for the present at least, to retain *Urbara* Wkr.\*—represented by a single injured specimen (FW: 12 veins; 7-8 stalked, 7 to costa; 2-3 stalked. HW: 8 veins; 3-4 connate; 6-7 connate)—if only to call special attention to this very exceptional character by which it may be recognised. The other instance of the same character is found in *Apoclisia rupestris* Wlsm.\*\*, a Jamaican species, which however differs in having veins 7-8 of the forewings separate. (Wlsm. MS. VIII. 1908.)

### 1. *Acrolophus leucopogon*, sp. n.

*Antennae* biciliate  $\frac{1}{2}$ , rather stout toward the base, tapering outward; pale brownish ochreous. *Palpi* recurved, suberect, appressed to the face, not rising above the vertex; cream-whitish. *Head* somewhat roughened; whitish above and in front, dark brown posteriorly. *Thorax* brownish grey, the tegulae tipped with pale ochreous, a tuft of long, curved, cream-white hair-scales projecting beneath on either side anteriorly. *Forewings* broad, the costa slightly convex toward the base, apex depressed, obtusely angular, termen oblique, scarcely convex; whitish ochreous, much smeared and shaded with fawn-brown, especially at and beyond the middle; three fuscous lines indicate the outer extremities of veins 9, 10, and 11, but do not quite reach the costa; a greyish brown shade lies at the base of the costa, and the whitish ochreous cilia are sprinkled in patches with minute fawn-brown and fuscous scales. *Exp. al.* 13 mm. *Hindwings* broadly ovate, wider than the forewings; dark greyish brown; cilia dark greyish brown, slightly mottled with pale cinereous. *Abdomen* dark greyish brown above,

[\*

URBARA Wkr.

Type: *Urbara galeata* Wkr. (Wkr. 1864).

URBARA Wkr. Cat. Lp. BM. 29 835 no. 129 sp. 1 (1864); Wlsm. Tr. Ent. Soc. Lond. 1887 140, 145 (1887); Frnld. Ent. Am. 3 196 (1887); Dyar Can. Ent. 32 306 (1900). *ACROLOPHUS* Meyr. Tr. Ent. Soc. Lond. 1913 191-2 (1913).]

[\*\*

APOCLISIS, gen. n.

(ἀποκλίσσις = turning in another direction.)

Type: *Apoclisia rupestris* Wlsm.

FW: 12 veins; 2-3 stalked; rest separate, 7 to termen, radius to below 8. HW: 8 veins, all separate. Palpi recurved in ♂, porrect in ♀.

### *Apoclisia rupestris*, sp. n.

*Antennae* simple, pale cinereous. *Palpi* overarching to back of thorax in ♂, porrect to a length equal to head and thorax in ♀; whitish, shaded and sprinkled with fuscous. *Head* and *Thorax* whitish, mixed with fuscous. *Forewings* white, more or less suffused, sprinkled, and blotched with fuscous, the costa and termen with a series of dark marginal spots; markings very variable, tending to form three principal groups—an elongate patch on basal third; a smaller patch on fold, at half the wing-length; an irregular, somewhat triangular patch beyond the middle, its base toward the costa; cilia whitish, dusted with fuscous. *Exp. al.* 16-24 mm. *Hindwings* and cilia pale brownish fuscous. *Abdomen* somewhat hairy, pale brownish fuscous.

Type ♂ (76965); ♀ (76966) Mus. Wlsm. BM.

*Hab.* West Indies—JAMAICA: Runaway Bay, ⊕ *Rhachycallis rupestris*, in galleries at roots, 16. III, ex. 15. III - 6. IV. 1905 (Wlsm.).]



whitish ochreous beneath. *Legs* whitish ochreous, the tarsi faintly spotted above with pale greyish brown.

*Type* ♂ (67063) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). Unique.

## 2. *Acrolophus panamae* Busck.

*Acrolophus panamae* Busck Pr. US. Nat. Mus. 47 66 (1914) <sup>1</sup>.

*Type* ♂ ♀ (16771) US. Nat. Mus. [*PTT.* (33991-34003) Mus. Wlsm. BM.]

*Hab.* PANAMA <sup>1</sup>: Alhajuela <sup>1</sup>; Cabima <sup>1</sup>; Trinidad River <sup>1</sup>; Tabernilla <sup>1</sup>; Paraiso <sup>1</sup>; Corozal <sup>1</sup>; IV-VI. (*A. Busck*) <sup>1</sup>.

## 3. *Acrolophus bifurcata* Busck.

*Acrolophus bifurcata* Busck Pr. US. Nat. Mus. 47 66-7 (1914) <sup>1</sup>.

*Type* ♂ (16772) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Corozal <sup>1</sup>; La Chorrera <sup>1</sup>; Alhajuela <sup>1</sup>; IV-V. (*A. Busck*) <sup>1</sup>.

## 4. *Acrolophus lerodes*, sp. n., Drnt.

*Antennae* cinereous. *Palpi* obliquely ascending, not reaching above the eyes; cinereous, outwardly shaded with fuscous. *Head* and *Thorax* greyish fuscous. *Forewings* cinereous, irrorated with fuscous, and somewhat ochreous-tinged on the disc; with a series of dark fuscous spots along the costa and before the termen, and with three rather conspicuous rounded discal spots—one at the end of the cell, a second preceding it obliquely on the fold, with a smaller one on the fold slightly nearer to the second spot than to the base; cilia cinereous, indistinctly barred with fuscous. *Exp. al.* 18 mm. *Hindwings* rather dark fuscous, somewhat purplish tinged; cilia cinereous, fuscous toward their base. *Abdomen* greyish fuscous: *genitalia*, uncus slender, obliquely bent, extending beyond the claspers, which are rather broad and cordate. *Legs* (missing).

*Type* ♂ (66882) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Tonalapa, VI. (*H. H. Smith*).

Forewings with veins 8-9 stalked.

## 5. *Acrolophus misema*, sp. n. (Tab. X. fig. 27.)

*Antennae* biserrate, rapidly tapering to a slender apex; pale brownish ochreous, faintly barred with brown. *Palpi* very roughly clothed above and beneath, the long scales on the underside projecting forward beyond the short, naked, terminal joint; pale brownish ochreous, profusely brown-dusted. *Head* very rough; brownish ochreous. *Thorax* pale brownish ochreous. *Forewings* pale brownish ochreous, sparsely brown-dusted; a brown fascia, commencing in a group of three dark costal dots at one-third, is obliquely widened outward to the fold, which it crosses at its inner edge, nearly reaching the middle of the dorsum; beyond it, at two-thirds, is another brown patch, commencing in a narrow dark costal shade and descending less obliquely to the tornus, its inner edge almost touching the outer extremity of the previous fascia, its outer edge somewhat dilated toward the apex; these fasciae are both mottled by lines of very dark raised brownish fuscous scales of which there are three semidetached patches along the lower portion of the termen preceding the mottled cilia. *Exp. al.* 15 mm. *Hindwings* greyish brown. *Abdomen* greyish brown. *Legs* brownish ochreous, the tarsi faintly darker-ringed.

*Type* ♀ (66881) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Tierra Colorada, 2000 ft., X. (*H. H. Smith*). Unique.



### 6. *Acrolophus salvini* Druce.

*Thysanosedes salvini* Druce Ann-Mag. NH. (7 s.) 7 441 (1901)<sup>1</sup>.

Type ♂ (4530); ♀ (4531, Wlsm. Det. 1908) Mus. J. J. Joicey (*Witley*).

*Hab.* PANAMA<sup>1</sup>: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*): CANAL ZONE<sup>1</sup>: Obispo (*O. Salvin*)<sup>1</sup>.

The ♂ is in very poor condition; the ♀, which is a little better, is freely irrorated with rather dark fawn-brown strigulae, a small pointed patch of the same crossing the fold downward beyond its middle, and almost connected upward with a similar spot at the end of the cell—placed obliquely a little beyond it; the subapical area is less freckled than the remainder of the wing-surface, and the hindwings have a distinctly darker and more fuscous tinge than the forewings; all the veins are separate in both wings. The uncus of the ♂ is double, angulate, the angle at the bend not produced; the claspers are wide and rather deeply excised at their apex, the upper angle slightly produced, inverted, and truncate (Wlsm. MS. 805/1904).

### 7. *Acrolophus cosmeta*, sp. n. (Tab. X. fig. 28.)

*Antennae* subochreous, the basal joint pale testaceous. *Palpi* closely appressed to the face, the terminal joint erect, longer than the median, both densely hairy; pale testaceous, the median joint shaded with dark brown externally. *Head* and *Thorax* pale testaceous. *Forewings* somewhat shining, pale testaceous, a dark fuscous streak along the base of the costa, an outwardly oblique, unicate, cuneiform fawn-brown blotch before the middle of the dorsum, with a separate dorsal spot of the same colour beneath its apex; about the wing-surface are numerous specklings of pale fawn-colour, especially along, beyond, and above the cell; cilia pale fawn, with some dark brown scales along the margin at their base around the apex and upper half of the termen. *Exp. al.* 24 mm. *Hindwings* whitish cinereous, shaded with greyish brown on their outer third; cilia somewhat dense on the outer half of the costa, whitish cinereous shading to brownish grey on their outer half. *Abdomen* brownish grey. *Legs* whitish cinereous.

Type ♂ (67061) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Panima, 1800 ft., X. 1879 (*G. C. Champion*). Unique.

### 8. *Acrolophus arida*, sp. n.

*Antennae* simple; pale brownish cinereous. *Palpi* short, porrect, reaching nearly the length of the head beyond it; very hairy, the short terminal joint almost concealed; brownish cinereous. *Head* and *Thorax* pale brownish cinereous. *Forewings* with rather rounded costa, depressed apex, straight oblique termen and somewhat angular tornus, the dorsum rounded and widened; whitish ochreous, sparsely mottled and streaked with fawn-brown, with some admixture of blackish scales—these especially noticeable in an elongate patch along the base of the costa, in a series of seven or eight costal spots from middle to apex, and in lines following the neurulation about the lower angle of the cell and beyond the end of the cell to the termen and apex; cilia whitish ochreous, mixed with fawn-brownish. *Exp. al.* 23 mm. *Hindwings* rather shining, pale brownish grey; cilia whitish cinereous, with a double fawn-brown shade-line running through them. *Abdomen* brownish grey, with paler transverse bands. *Legs* whitish cinereous (broken).

Type ♂ (66883) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

### 9. *Acrolophus pallida* Mschlr.

*Acrolophus pallidus* Mschlr. Verh. ZB. Ges. Wien **31**: 1881 438 sp. 138 Pf. 18·46 (1882)<sup>1</sup>; Wlsm. Tr. Ent. Soc. Lond. **1887** 140-1, 147, 153-4 (1887)<sup>2</sup>; Mschlr. Ab. Senck. Nat. Ges. **16** 335-6 (1890)<sup>3</sup>.

Type ♀.

*Hab.* AMERICA, C-S. Central America—COSTA RICA: Orosi (*C. Picado*). South America<sup>1-3</sup>—DUTCH GUIANA<sup>1-3</sup>; Paramaribo<sup>1-3</sup>—FRENCH GUIANA: St. Jean, Rio Maroni (*W. Schaus*, 6149, Drnt. Det. 1908, US. Nat. Mus.).

The specimen from St. Jean, Rio Maroni, is a ♂ with palpi oblique, closely appressed to the face, not reaching above the crown of the head; FW: 8-9 stalked, to costa, rest separate; HW: 8 veins, all separate—this species may now be referred to the group *Neolophus* Wlsm.—Drnt.

### 10. *Acrolophus euporia*, sp. n. (Tab. X. fig. 29.)

*Antennae* yellowish white. *Palpi* closely appressed to the face; white, a brownish fuscous patch on the outer side below the eye. *Head* and *Thorax* white; the latter strongly crested above with brownish fuscous and ochreous scales. *Forewings* white, mottled with pale olive-grey, alternating with bright yellow ochreous speckling and a few black scales; along the costa the bright yellow-ochreous somewhat prevails, but immediately below it and over the greater portion of the outer two-thirds, as far as the lower edge of the cell, it becomes mixed, in almost even proportions, with olive-grey mottling which only appears unmixed with ochreous on a rather broad white space preceding the termen; along the dorsum the olive-grey shade is somewhat darker, but does not extend to the tornus—some ochreous scales are mixed with it, and these prevail in two rounded excrescences overlapping the fold, with some black scales around their margins, the outer one of these is at about the middle of the dorsum; there are also a few black scales at the end of the cell, and again in three broken lines through the apical and terminal cilia, which are otherwise bright, shining, golden ochreous; ternal cilia white. *Exp. al.* 25 mm. *Hindwings* dark purplish fuscous; cilia yellowish white, a fuscous shade-line running through them near their base. *Abdomen* greyish fuscous above, white beneath. *Legs* white, the tarsi banded with brownish ochreous.

Type ♂ (6001, Wlsm. Det. 1908) US. Nat. Mus. [PT. (34005) Mus. Wlsm. BM.]

*Hab.* MEXICO: GUERRERO: Iguala, 2400 ft., VI. 1906 (*W. Schaus*). Two specimens.

A beautiful and conspicuously distinct species, with FW: 8-9 stalked, belonging to the group *Neolophus*.

### 11. *Acrolophus superstes*, sp. n. (Tab. X. fig. 30.)

*Antennae* pale fawn. *Head* and *Palpi* pale fawn. *Thorax* pale fawn, sprinkled with pale brownish fuscous. *Forewings* very pale fawn, almost fawn-whitish, much streaked and mottled with lighter and darker shades of brownish fuscous; the costa is narrowly tinged throughout with pale fawn-ochreous, but exhibits a series of fuscous costal spots, not touching the margin, those toward the base are very small, but from the middle to the apex are four larger ones, of which the outer three point very obliquely inward and form part of a series of shorter radiating marginal streaks, in which four at and below the apex are smaller than the others below them along the termen, each pair in their turn throwing a dark shade through the otherwise pale fawn cilia—to the number of about seven, including one at the apex and one at the tornus; from the base of the costa a dark fuscous streak, more or less mottled with paler

shades and irregular in its ill-defined outline, extends outward and downward to the lower angle of the cell, where it is diffused outward to the lower terminal streaks, the space above and beyond it showing narrow lines of dark fuscous scaling disconnected from the marginal streaks beyond them; below the fold is a small dark fuscous patch near the base, throwing a narrow line along vein 1° and expanding again in an angular patch connected outward at its apex to the lower angle of the cell—below it are a few scattered spots of fuscous scales. *Exp. al.* 30 mm. *Hindwings* brownish fuscous; cilia pale fawn, mottled on the termen and apex with pale brownish fuscous. *Abdomen* greyish fuscous. *Legs* pale fawn, shaded externally and banded on the hind tarsi with pale brownish fuscous.

*Type* ♀ (6095, Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* GUATEMALA: ALTA VERA PAZ: Cacao, Trece Aguas (*Schwarz* and *Barber*).  
Unique.

### 12. *Acrolophus corymba*, sp. n., Drnt.

*Antennae* fuscous. *Palpi* densely clothed, recurved and very closely appressed to the head, not reaching farther back than the base of the antennae; dark purplish fuscous. *Head* dark fuscous, with some admixture of brownish and purplish. *Forewings* dark fuscous, irrorate throughout with slightly raised purplish scales, and with two conspicuous tufts of raised brownish scales in the fold, with a smaller tuft immediately below an elongate dark brownish plical patch; the costa is spotted throughout with dark brownish fuscous, some of these spots being followed by others in oblique lines across the wing; a patch of dark scales occurs at the end of the cell, and another, ovate, below the apex, with a series of indistinct dark spots at the base of the fuscous cilia through which run two darker lines. *Exp. al.* 28 mm. *Hindwings* fuscous; cilia fuscous, with a dark line running through them near their base. *Abdomen* hairy above; dark greyish fuscous: *genitalia*, uncus double, bent over, not projecting beyond the spatulate claspers. *Legs* fuscous, hind tibiae and basal joint of tarsi with long paler hairs.

*Type* ♂ (67060) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., X-XI. 1880 (*G. C. Champion*). Unique.

Forewings with veins 8-9 stalked.

### 13. *Acrolophus victrix*, sp. n.

*Antennae* slightly serrate in the ♀; brownish fuscous. *Palpi* porrect, obliquely elevated, extending to about the length of the head beyond it; very roughly clothed, but not densely hairy; dark brownish ochreous beneath, more fuscous above. *Head* rough; dark brownish fuscous. *Forewings* long, widening outward, with rounded apex and oblique termen; brownish fuscous, mottled with darker shades of the same and with some chestnut-brown and dark brownish ochreous patches; the darker shades form a series of indistinct costal spots, an indistinct patch at about the middle of the cell, another at the end of the cell, slightly preceded by another below the cell which is more or less diffused and connected with the median patch, an elongate oblique patch opposite to the middle of the termen and some transverse mottling near the base; the chestnut-brown tinge is chiefly visible from the end of the cell to the termen above the tornus, on the middle of the dorsum, and in a small spot between the cell and the fold at about one-fifth from the base; the dark ochreous tinge is mainly confined to two angular patches above the dorsum, one before and one beyond the middle, their apices encroaching upon the dark ground-colour on the lower half of the cell before the middle and at the lower angle of the cell respectively; there is also an oblique elongate patch beyond the cell, pointing to and nearly reaching the costa before the apex; cilia brownish fuscous, mottled with paler shades. *Exp. al.* 35 mm. *Hindwings* brownish fuscous; cilia slightly paler, but with a dark shade-line near their base. *Abdomen* fuscous. *Legs* brownish fuscous, hind tibiae fuscous, tipped with dull ochreous.

*Type* ♀ (67058) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (67059) US. Nat. Mus.]

*Hab.* GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., X-XI. 1880 (*G. C. Champion*). Two specimens.

This species resembles 6579 *cressoni* Wlsm. in colouring, but is of the size and form of 6598 *variabilis* Wlsm.; FW: 8-9 are stalked.

14. **Acrolophus fervida** Busck.

*Acrolophus fervida* Busck Pr. Ent. Soc. Wash. 14: 1912 222-3 (1912)<sup>1</sup>.

*Type* ♂ (15419, Orizaba) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Orizaba, VI. (*R. Müller*)<sup>1</sup>—COSTA RICA<sup>1</sup>: LIMON<sup>1</sup>: Sixola River (*W. Schaus*)<sup>1</sup>: CARTAGO<sup>1</sup>: Turrialba (*W. Schaus*)<sup>1</sup>—PANAMA: PANAMA: La Chorrera, IV-V. 1898 (*C. H. Dolby-Tyler*). South America—COLOMBIA, W.: El Credo, 1000 ft., II. 1907 (*W. F. H. Rosenberg*).

15. **Acrolophus directa** Busck.

*Acrolophus directus* Busck Pr. Ent. Soc. Wash. 14: 1912 223 (1912)<sup>1</sup>: Ins. Insc. Mens. 1 143 (1913)<sup>2</sup>.

*Type* ♀ (15420) US. Nat. Mus.

*Hab.* MEXICO<sup>1-2</sup>: MEXICO<sup>1-2</sup>: Mexico City, VI. (*R. Müller*)<sup>1-2</sup>.

16. **Acrolophus apertella** Busck.

*Acrolophus apertella* Busck Ins. Insc. Mens. 1 142-3 (1913)<sup>1</sup>.

*Type* ♂ (16665) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: MEXICO<sup>1</sup>: Zacualpan, VII. (*R. Müller*)<sup>1</sup>.

17. **Acrolophus modesta** Busck.

*Acrolophus modestus* Busck Pr. Ent. Soc. Wash. 14: 1912 223 (1912)<sup>1</sup>.

*Type* ♂ (15421) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, VI-VII. (*R. Müller*)<sup>1</sup>.

18. **Acrolophus jalapae**, sp. n.

*Antennae* minutely ciliate, brownish. *Palpi* erect; brownish cinereous, shaded and sprinkled with dark fuscous. *Head* and *Thorax* brownish fuscous. *Forewings* brownish cinereous, suffused and sprinkled with fuscous, and blotched with darker brownish fuscous; the outer discal and plical patches are almost confluent, the former placed obliquely, extending nearly to the tornus, but angulated backward to the dorsum by a narrow line of dark scales, which forms a continuation of the dark fuscous ante-terminal streak; the outer third of the costa, with the apex and termen, shows rather widely separated dark fuscous spots or short streaks; cilia much shaded with fuscous. *Exp. al.* 29-38 mm. *Hindwings* dark purplish fuscous; cilia tipped with brownish cinereous. *Abdomen* greyish fuscous: *genitalia*, uncus single, bent over, not angulate—the long, narrow, somewhat curved, spoon-shaped claspers extending well beyond it, evenly rounded posteriorly. *Legs* moderately smooth; brownish cinereous.

*Type* ♂ (4648); ♀ (4650) Mus. Wlsm. BM. [PT. (4549) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*).

The ♀ has short porrect palpi, and is larger than the ♂; FW. 8-9 are separate.

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19. *Acrolophus variabilis* Wlsm.

*Ortholophus variabilis* Wlsm. Tr. Ent. Soc. Lond. 1887 169-70 Pf. 8·24, 24<sup>a-c</sup> (1887) ; Btmlr. Ent. Am. 4 29 (1888)<sup>2</sup>; Riley, Smith's List Lp. Bor-Am. 95 sp. 5065 (1891)<sup>3</sup>; Dyar Can. Ent. 32 310, 327 (1900)<sup>4</sup>; Bull. US. Nat. Mus. 52 579 sp. 6598 (1902)<sup>5</sup>; Krft., Smith's Check-List Lp. Bor-Am. 124 sp. 7138 (1903)<sup>6</sup>.

Type ♂ (36616); ♀ (36617) *Arizona*, Mus. Wlsm. BM.

*Hab.* AMERICA, N-C. United States <sup>1-6</sup>—TEXAS<sup>4</sup>—COLORADO<sup>4</sup>—NEVADA<sup>4</sup>—CALIFORNIA<sup>2</sup>—ARIZONA<sup>1, 4-5</sup>—NEW MEXICO<sup>4</sup>. Central America—MEXICO: SONORA: 1883 (*H. K. Morrison*).

20. *Acrolophus marcida*, sp. n.

*Antennae* simple; brownish ochreous. *Palpi* erect, with prominent articular tufts; pale ochreous, thickly bestrewed with brown and black scales on the tufts. *Head* and *Thorax* pale ochreous. *Forewings* pale ochreous, speckled and transversely striated with a mixture of buff-brown and blackish scales, these aggregated in the position of the two discal patches and of the larger plical patch, which joins them at its upper angles and is produced from its lower angle to the dorsum; there is an ill-defined reduplicated terminal line in the pale ochreous cilia. *Exp. al.* 17-26 mm. *Hindwings* brownish fuscous, with a strong vinous tinge; cilia pale cinereous, shaded on their basal half. *Abdomen* greyish fuscous: *genitalia*, uncus single, shortly bent over; claspers slightly widened posteriorly, with oblique hind margin, slightly produced at its lower angle. *Legs* smooth; very pale ochreous, sparsely dusted with brownish scales.

Type ♂ (66884); ♀ (66885) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (66888-9) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Tonalapa, VI. (*H. H. Smith*). Six specimens.

The ♀ has long porrect palpi, stretching three times the length of the head beyond it; in the forewings the black scaling is reduced to a minimum, the markings distinct, buff-brown, with some suffusion of the same.

21. *Acrolophus harmoniella* Busck.

*Acrolophus harmoniella* Busck Ins. Insc. Mens. 1 143 (1913)<sup>1</sup>.

Type ♂ (16666) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, VI. (*R. Müller*)<sup>1</sup>.

22. *Acrolophus ectenes*, sp. n.

*Antennae* pale yellowish brown. *Palpi* ♀ rather short, curved, closely appressed to face; median joint very hairy, terminal joint short, thickened with loose hairs; yellowish brown. *Head* and *Thorax* yellowish brown. *Forewings* long, narrow, thinly clothed, semitransparent; reddish grey, with an admixture of pale yellowish brown and some darker scaling, giving the appearance of faint reticulate mottling; at the end of the cell is a transverse spot of dark reddish brown, with a thickening of scales, indicating a less conspicuous spot on the fold before and below it, which is preceded by a patch of pale ashy grey scaling on either side of the fold; cilia bronzy grey. *Exp. al.* 27 mm. *Hindwings* semitransparent, slightly iridescent; slaty bluish; cilia bronzy grey. *Abdomen* hairy; dark reddish grey, anal tuft cinereous. *Legs* pale cinereous.

Type ♀ (66894) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Dos Arroyos, 1000 ft., IX. (*H. H. Smith*). Unique.



23. *Acrolophus bactra* Busck.

*Acrolophus bactra* Busck Pr. US. Nat. Mus. 47 67 (1914) <sup>1</sup>.

Type ♂ (16773) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Alhajuela (*A. Busck*) <sup>1</sup>.

24. *Acrolophus abdita*, sp. n.

*Antennae* ♂ somewhat serrate toward the apex; brownish ochreous. *Palpi* recurved to a little beyond the middle of the thorax, densely hairy throughout; brownish fuscous. *Thorax* hairy; brownish fuscous. *Forewings* dark brownish ochreous, with a rather tessellated pattern of dark brownish fuscous shading, and a single bright yellow ochreous spot immediately beyond the upper angle of the cell; the costa is narrowly dark brownish fuscous throughout, and, below it, the alternate dark ochreous and fuscous spots are perhaps more clearly defined than on the remainder of the wing-surface; there is an indistinct dark brownish fuscous spot on the fold at half the wing-length, and the yellow spot at the end of the cell is slightly margined before and behind with dark brownish fuscous; cilia brownish fuscous, with a faint ochreous line along their base, a few scales above the tornus being tipped with yellowish ochreous. *Exp. al.* 18–22 mm. *Hindwings* paler brownish, or rather more greyish fuscous; cilia the same, with a pale line scarcely indicated along their base. *Abdomen* hairy, greyish fuscous: *genitalia*, uncus evenly curved, single; claspers of even width, rather slender, inverted at the apex. *Legs* greyish fuscous.

Type ♂ (66951); ♀ (66952) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: QUICHÉ: Quiché Mts., 7000–9000 ft., 31. VII–5. VIII. 1880 (*G. C. Champion*). Two specimens.

The ♀ lacks the tessellated, or mottled, pattern of the ♂, being almost unicolorous brownish, without the yellow spot, and the hindwings are more greyish; the abdomen bears a very noticeable, large, flowing tuft of curly hair-scales on the anal segments. Apparently allied to *cleptica* Wlsm., which has very similar genital segments, but distinguishable by its longer palpi and paler hindwings, as also by the single, pale yellowish spot on the forewings.

25. *Acrolophus cleptica*, sp. n.

*Antennae* serrate and shortly ciliate; brown. *Palpi* recurved to the front of the thorax, very hairy; brownish ochreous, mixed with dark brown and some fuscous scales. *Thorax* hairy; brownish fuscous. *Forewings* pilose at the base and somewhat roughly clothed along the costa; brownish ochreous, thickly bestrewed with dark brownish fuscous scales, forming a somewhat general suffusion in which the still darker plical and discal patches are easily distinguished, although not clearly defined, the plical being preceded and followed, and the outer discal followed, by indistinct pale patches; cilia pale brownish fuscous, with a vinous tinge and a darker shade on their basal half. *Exp. al.* 18–22 mm. *Hindwings* brownish fuscous; cilia brownish cinereous. *Abdomen* hairy at the base; greyish fuscous: *genitalia*, uncus single, bent over, not angulated, the claspers (apparently broken in the Type). *Legs* hairy; brownish cinereous, mixed with fuscous.

Type ♂ (66895); ♀ (66896) *Sierra de las Aguas Escondidas*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66898) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: *Sierra de las Aguas Escondidas*, 7000 ft., VII. (*H. H. Smith*); *Omiteme*, 8000 ft., VII. (*H. H. Smith*); *Dos Arroyos*, 1000 ft., IX. (*H. H. Smith*). Five specimens.

Distinctly smaller than 6602 *arcanella* Clms., but with very similar colouring; the single ♀ is scarcely larger than the ♂, with short, porrect, hairy palpi.

### 26. *Acrolophus lithopa*, sp. n., Drnt.

*Antennae* strongly bipectinate; brownish ochreous. *Palpi* long, recurved, reaching to middle of thorax; cinereous, with an admixture of dark fuscous hair-scales. *Head* and *Thorax* brownish ochreous, the latter much mixed with dark fuscous. *Forewings* pale brownish ochreous, irrorated with pale fuscous scales, tending to follow the lines of the neuration; along the costa is a series of oblique dark fuscous spots, from some of which originate obscure broken transverse lines, the most noticeable of which crosses the wing obliquely inward at the end of the cell, and is connected toward the tornus with another broken line from near the apex; an elongate dark fuscous patch occurs in the fold toward its base, and the termen is obscurely dark-spotted; cilia cinereous, mixed with paler and darker fuscous scales. *Exp. al.* 21 mm. *Hindwings* fuscous, paler toward the costa; cilia fuscous, with a pale line along their base. *Abdomen* somewhat hairy, fuscous: *genitalia*, uncus double, curved downward, projecting slightly beyond the spatulate claspers. *Legs* (missing).

*Type* ♂ (66950) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* MEXICO: DURANGO: near Durango City (*H. Becker*). Unique.

Forewings with veins 7-9 separate.

### 27. *Acrolophus echinon* Druce.

= *cassicordis* Dyar.

*Felderia echinon* Druce Ann-Mag. NH. (7 s.) 7 443 (1901)<sup>1</sup>. *Felderia cassicordis* Dyar Jr. NY.

Ent. Soc. 15:1907 53 (1907)<sup>2</sup>.

*Types* ♂ ♂: *echinon* Druce ♂ (*Orizaba*, 4564 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*); *cassicordis* Dyar ♂ (10153, *Mexico*) US. Nat. Mus.

*Hab.* MEXICO<sup>1-2</sup>: DURANGO: near Durango City (*H. Becker*): MEXICO<sup>2</sup>: Mexico City, V-VIII. (*R. Müller*)<sup>2</sup>: VERA CRUZ<sup>1</sup>: *Orizaba* (*Boucard*)<sup>1</sup>.

The Type of *echinon* Druce exhibits two, somewhat unusually clear, white spots a little above the fold; the first triangular, at about one-third the wing-length, its apex pointing downward toward the fold, its base resting on the lower edge of the cell, this is somewhat clearly outlined by the dark fuscous space which precedes it and, passing around its apex, separates it by a broad oblique band from a similar and also rather triangular spot, preceding vein 2 and resting on the outer end of the fold with its apex upward. There are a few whitish scales also at the end of the cell, but not conspicuous; the darker colouring has a tendency to assume the form of lines following the neuration, as described, but imparts also to the whole wing-surface, above and beyond the white spots, a somewhat speckled appearance—the white spots themselves are less conspicuous (more blurred) in another specimen from near Durango City (67064). The uncus is double, curved over, not angulated, and reaching to the ends of the claspers, which are straight along their upper edge and somewhat dilated and rounded beneath.—Wlsm. MS. 815/1904.

### 28. *Acrolophus condita*, sp. n., Drnt.

*Antennae* strongly bipectinate; brownish ochreous. *Palpi* recurved to middle of thorax; brownish ochreous, clothed with dark fuscous hair-scales on their outer sides. *Head* and *Thorax* dark fuscous. *Forewings* fuscous, irrorated with blackish, with some admixture of brownish ochreous; the costa is obscurely spotted with blackish throughout—the spots near the apex being separated by brownish ochreous

appear more clearly defined; a rather conspicuous triangular patch occurs at the end of the cell, followed by brownish ochreous scaling, some traces of dark markings appear also toward the base, but the specimen is not in good condition; cilia fuscous, with a narrow paler line along their base. *Exp. al.* 26 mm. *Hindwings* fuscous; cilia with two narrow paler lines throughout. *Abdomen* fuscous: *genitalia*, uncus single, evenly curved downward, not reaching beyond the extremity of the claspers, which are rather narrow and strongly bowed inward. *Legs* dark fuscous.

*Type* ♂ (4716) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: Las Vigas, 8000 ft., 1887 (*W. Schaus*). Unique.

Veins 7-9 are separate in the forewings.

### 29. *Acrolophus linus* Druce.

*Acrolophus linus* Druce Ann-Mag. NH. (7 s.) 7 441 (1901)<sup>1</sup>.

*Antennae* shortly bipectinate, the pectinations ciliate; inclining to ochreous, rather than brown. *Palpi* recurved, not reaching beyond the middle of the thorax; very hirsute, the median joint throwing up a number of brownish ochreous hair-scales. *Forewings*: the ground-colour is partly suffused with dark brownish fuscous, mixed with shining leaden grey scales, the portions below the fold and around the apex and termen less suffused, the latter space tinged with pale buff-brown; the median patch (referred to in the description) is the usual blotch which crosses the fold obliquely, preceding a less conspicuous spot at the end of the cell; the cilia have a somewhat tessellated appearance, in conformity with the general colouring of the wing. *Exp. al.* 26 mm. *Hindwings* pale greyish brown; cilia with somewhat darker mottlings. *Abdomen* greyish brown: *genitalia*, uncus wide, bent, not angulated, double, toothed at the apex; claspers produced beyond the uncus, bulging beneath, somewhat depressed and curved inward, with a rather truncate apex. *Legs* greyish brown. Wlsm. MS. 806/1904.

*Type* ♂ (4535 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Orizaba (*Boucard*)<sup>1</sup>: GUERRERO: Omilteme, 8000 ft., VII-VIII. (*H. H. Smith*).

### 30. *Acrolophus trichosoma*, sp. n., Drnt.

= *Anaphora numidia* (p.) Druce Ann-Mag. NH. (7 s.) 7 442 (1901)<sup>1</sup>.

*Antennae*, ♂ strongly biserrate; fawn-ochreous. *Palpi* densely clothed throughout, closely appressed to head and overarching nearly to middle of thorax; brownish ochreous, mixed with ferruginous. *Head* and *Thorax* brownish ferruginous. *Forewings* pale fawn brownish, with brownish ochreous reticulations—more noticeable beyond the cell, the basal area being suffused with pale fuscous, except, perhaps, along the dorsum; a series of 7 or 8 rather conspicuous dark fuscous spots extends along the costa from the base to vein 11, and a small, but distinct, spot of the same colour occurs at the end of the cell, and a large, trapezoidal, dark fuscous patch on the fold, toward the end of the cell; cilia fawn-ochreous, shaded with fuscous. *Exp. al.* 32 mm. *Hindwings* pale fuscous; cilia slightly darker, with a pale line along their base. *Abdomen* clothed throughout with long, shaggy, pale fuscous hair-scales: *genitalia*, uncus double, long and bent over, not reaching the ends of the claspers, which are long, bowed and rather narrow, with the terminal margins rounded. *Legs* clothed with long pale fuscous hairs.

*Type* ♂ (66953, *San Gerónimo*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (4549 Drnt. Det. 1904) Mus. J. J. Joicey (*Witley*).]

*Hab.* GUATEMALA<sup>1</sup>: (*Boucard*)<sup>1</sup>: BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*). Two specimens.

The specimen described is somewhat worn, but quite distinct—the Paratype of *Anaphora numidia* Druce from Guatemala (*Boucard*)<sup>1</sup> [♂ 4549 Drnt. Det. 1904] must be referred to *trichosoma*.

### 31. *Acrolophus harpella*, sp. n.

*Antennae* slightly serrate, minutely ciliate; brownish. *Palpi* overarching to the middle of the thorax, densely clothed and tufted, especially on the terminal joint; dull brownish fuscous. *Head* and *Thorax* dull brownish fuscous. *Forewings* dull brownish fuscous, thickly suffused with dark fuscous, almost obliterating the usual discal and plical patches, the anteterminal patch beyond the cell being somewhat more clearly defined, there are a few dark costal streaks, and at the end of the cell are some dark chestnut-brownish scales; cilia brownish fuscous. *Exp. al.* 28-32 mm. *Hindwings* dark brownish fuscous; cilia slightly paler, very long on the flexus. *Abdomen* strongly pilose, brownish fuscous; *genitalia*, uncus single, bent over, not reaching to the ends of the claspers—these rather slender and sinuate, bent upward before the middle, thence gradually dilated and somewhat inverted, elongate spoon-shaped, with rounded terminal margins. *Legs* hairy; brownish cinereous, shaded with fuscous.

*Type* ♂ (66901) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (6076, 6125-7) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: Jalapa, 4500 ft. (*M. Trujillo*; *W. Schaus*). Eleven specimens.

### 32. *Acrolophus barbipalpus* Busck.

*Acrolophus barbipalpus* Busck Pr. Ent. Soc. Wash. 14: 1912 224 (1912)<sup>1</sup>.

*Type* ♂ (15423) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, VI. (*R. Müller*)<sup>1</sup>.

### 33. *Acrolophus icarus* Busck.

*Acrolophus icarus* Busck Pr. Ent. Soc. Wash. 14: 1912 223-4 (1912)<sup>1</sup>.

*Type* ♂ (15422) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, VIII-XI. (*R. Müller*)<sup>1</sup>.

### 34. *Acrolophus forreri*, sp. n.

*Antennae* serrate, minutely ciliate; brownish fuscous. *Palpi* erect, tufted; brownish cinereous, stained externally with dark fuscous. *Head* and *Thorax* brownish cinereous, mixed with fuscous. *Forewings* brownish cinereous, almost entirely suffused with reddish fuscous, the still darker discal and plical patches preceded and followed by obscure brownish cinereous streaks; the outer discal patch is elongate, diffused outward at its lower extremity, and thus confluent with a curved line of indistinct anteterminal spots; cilia brownish cinereous, profusely sprinkled with paler and darker scale-tips throughout. *Exp. al.* 17-33 mm. *Hindwings* brownish fuscous; cilia brownish cinereous, with a darker shade-line near their base. *Abdomen* greyish fuscous; *genitalia*, uncus double, angular, the projecting angle at the point of deflection rather shorter than the points, but extending beyond the ends of the tapering claspers which are rounded and slightly depressed posteriorly. *Legs* brownish cinereous, shaded with fuscous, moderately smooth.

*Type* ♂ (66964); ♀ (66965) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (65543-4, 65546, 66972, 66974) US. Nat. Mus.]

*Hab.* MEXICO: DURANGO: (*A. Forrer*). Eighteen specimens.

This ♀ is larger than the ♂, and has hairy palpi, porrect twice the length of the head.



35. *Acrolophus praetusalis* Wkr. (Tab. X. fig. 31.)

=\**granulatella* (p.) Wkr.

*Palthis*? *praetusalis* Wkr. Cat. Lp. BM. 16 155 sp. 8 (1858)<sup>1</sup>. *Tirasia granulatella* (p.) Wkr. Cat. Lp. BM. 28 513 sp. 1 (1863)<sup>2</sup>.

Type ♂ (1845:123) BM.

Hab. BRITISH HONDURAS (= \*HONDURAS<sup>1-2</sup>): 1844-5 (*D. Dyson*<sup>1-2</sup>).

Walker founded *Tirasia granulatella* on three specimens, all ♀ ♀, each belonging to a different species—the Type, from Villa Nova, described as a ♂, is a ♀ with divided frenulum; the paratype, from Honduras, may be regarded as the ♀ of *praetusalis* Wkr. Drnt.

36. *Acrolophus boucardi* Druce.

*Acrolophus boucardi* Druce Ann-Mag. NH. (7 s.) 7 441 (1901)<sup>1</sup>.

*Antennae* simple. *Palpi* overarching the thorax (as in *Hypoclopus*). *Forewings* pale stone-ochreous, with dark fuscous costal streaks and spots, and some suffusion of the same beneath the costa and toward the termen, becoming confluent with the usual series of three or four darker patches, the paler dorsal band, throwing up two angular projections, is also well indicated; other specimens show that the species is capable of much variation—it has a tendency to exhibit slender lines of snow-white scales, but these do not appear on all specimens, probably because these scales are loosely attached, and thus very fugitive—in one very perfect example there is a continuous line along the fold, from near the base, and another, somewhat broken, following the lower edge of the cell and diverted from the cell along vein 2 to the tornus, a few scattered scales distributed from thence across the wing, nearly to the costa. *Exp. al.* 28-36 mm. *Abdomen*: *genitalia*, the uncus is double, gently curved, not angulated, its apex reaching as far as the end of the rather wide and evenly rounded claspers.

Type ♂ (4537); ♀ (4538 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).

Hab. MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Orizaba (*Boucard*)<sup>1</sup>: GUERRERO: Tonalapa, VI. (*H. H. Smith*).

Very close to 6588 *arizonella* Wlsm.; it differs in the pale costal line being more distinctly interrupted by dark spotting, and in the absence of the pale line marking the termen at the base of the cilia; moreover, the dark wing-markings are much more distinct and conspicuous, while in *arizonella* they are frequently reduced to quite insignificant streaks and spots. The hindwings have the same tawny purplish tinge in both species. Wlsm. MS. 807/1904.

37. *Acrolophus penumbra*, sp. n.

*Antennae* serrate, minutely ciliate; brownish fuscous. *Palpi* overarching the thorax, densely clothed throughout, the terminal joint with dilated tuft; brownish fuscous. *Forewings* dark fawn-brown suffused with fuscous, a series of slender fuscous strigulae descends from the costa becoming absorbed in a central fuscous shade, which connects and overflows the positions of the usual discal and plical patches, extending below the basal half of the fold to the dorsum and dilated beyond the cell to the termen and apex; cilia dull brownish cinereous, with two fuscous shade-lines running through, their tips also fuscous. *Exp. al.* 22-30 mm. *Hindwings* brownish fuscous; cilia dull brownish cinereous, shaded with fuscous. *Abdomen* brownish fuscous; *genitalia*, uncus double, long, bent over; claspers



dilated posteriorly, with obliquely truncate terminal margins. *Legs* brownish fuscous, densely clothed throughout, and speckled with dull brownish cinereous.

*Type* ♂ (67012); ♀ (67013) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PTT. (67015-16) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*). Eight specimens.

The ♀ has hairy porrect palpi, extending twice the length of the head beyond it.

### 38. *Acrolophus corvula*, sp. n.

*Antennae* serrate, minutely ciliate; brownish fuscous. *Palpi* overarching the thorax; brownish fuscous. *Head* and *Thorax* greyish fuscous. *Forewings* greyish fuscous with a slight vinous tinge, the plical patch takes the form of a broad very dark fuscous streak, running from near the base along the fold and abruptly terminated at about half the wing-length; the only discal patch is also very dark fuscous at the end of the cell, pointing obliquely toward the tornus and followed by a series of two or three semidetached anteterminal spots of the same colour; cilia pale greyish fuscous, with an indistinct shade-line near their base. *Exp. al.* 20-27 mm. *Hindwings* brownish fuscous; cilia rather paler. *Abdomen* greyish fuscous: *genitalia*, uncus single, curved, reaching to the ends of the claspers, which are dilated behind the middle, tapering to an obtusely rounded apex. *Legs* hairy, except on the terminal joints; the tarsi brownish cinereous.

*Type* ♂ (67023, *Durango*); ♀ (67024, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (67025) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, III. (*H. H. Smith*): DURANGO: (*A. Forrer*)—COSTA RICA: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*). Three specimens.

The ♀ is a little larger than the ♂, with porrect hairy palpi extending fully twice the length of the head beyond it; there is some indication of single whitish scales thrown up between the outer end of the cell and the termen—a not unusual feature in the genus, but although I cannot trace these in the ♂ I see no reason to doubt that these specimens belong to the same species.

### 39. *Acrolophus nubifer*, sp. n.

*Antennae* serrate; pale brownish ochreous. *Palpi* overarching the thorax, tufted; brownish fuscous, the basal joint paler in front about the level of the face. *Head* and *Thorax* brownish fuscous. *Forewings* brownish fuscous, suffused with a purplish vinous tinge, with transverse costal strigulae and a deep central shade of dark fuscous, the discal and plical patches being connected and rendered undistinguishable in shape by the dark central suffusion, which is slightly produced towards the tornus; cilia mottled, scarcely paler than the forewings. *Exp. al.* 19 mm. *Hindwings* greyish brown; cilia scarcely paler. *Abdomen* greyish fuscous: *genitalia*, uncus double at the points, evenly curved, not angulated, falling within the margin of the claspers which are strongly dilated posteriorly from a rather narrow stem, producing the appearance of a wide triangle. *Legs* pale brownish cinereous.

*Type* ♂ (67021) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*). Unique.

### 40. *Acrolophus bugabae*, sp. n.

*Antennae* serrate, minutely biciliate; brownish ochreous. *Palpi* overarching the thorax; brownish cinereous, shaded with fuscous. *Thorax* brownish fuscous. *Forewings* brownish cinereous, very distinctly mottled

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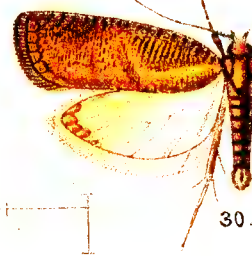
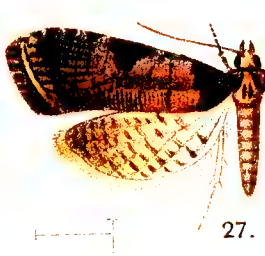
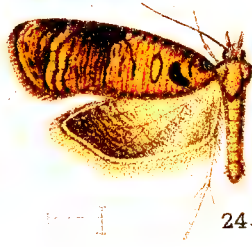
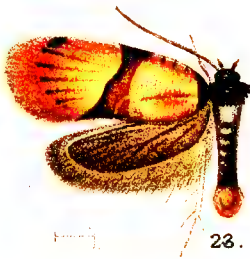
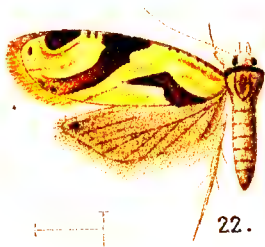
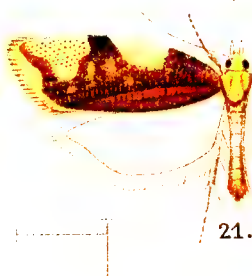
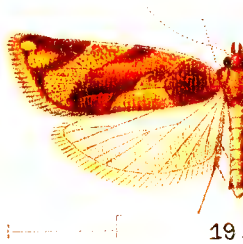
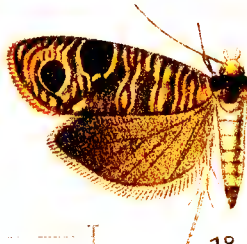
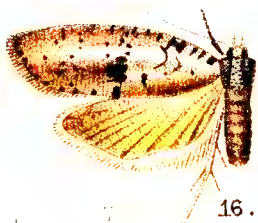
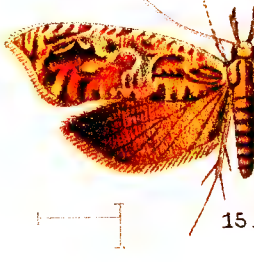
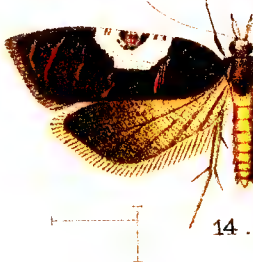
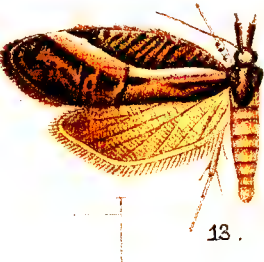
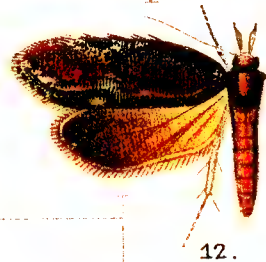
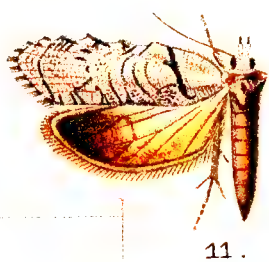
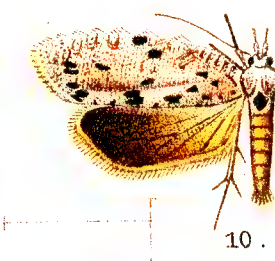
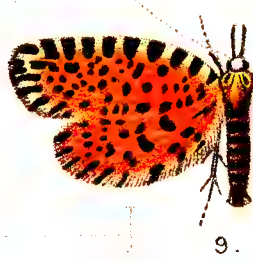
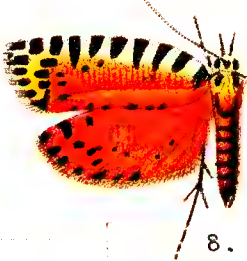
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### PLATE IX.

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throughout with dark brownish fuscous, the dark plical patch produced inward above the fold, nearly to the base, obliterating the form of the first discal spot; the outer discal spot, at the end of the cell, small, preceded and followed by a very pale ochreous space, the antemedial spots obliquely placed; the terminal spots concurrent, forming a dark line at the base of the brownish cinereous cilia. *Exp. al.* 20–30 mm. *Hindwings* greyish brown; cilia brownish cinereous. *Abdomen* hairy at the base; greyish fuscous: *genitalia*, uncus angular, single, the angle of deflection somewhat produced and sharply defined; claspers obliquely rounded, tapering, their upper edges somewhat straightened. *Legs* (missing).

*Type* ♂ (67026); ♀ (67027) *Bugaba*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (67029) US. Nat. Mus.]

*Hab. Central America*—GUATEMALA: ALTA VERA PAZ: Cahabon, 800 ft., II. 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: 1873 (*H. Ribbe*); *Bugaba*, 800–1500 ft., 1881–3 (*G. C. Champion*). Eight specimens.

The ♀ has the palpi very hirsute, extending twice the length of the head beyond it.

#### 41. *Acrolophus barema*, sp. n., Drnt.

*Antennae*, ♂ biserrate, pale fawn-ochreous. *Palpi* ♂ overarching the thorax, clothed with long hair-scales; fawn-ochreous, mixed with fuscous. *Head* and *Thorax* fawn-ochreous, mixed with brownish fuscous. *Forewings* brownish fuscous, becoming fawn-ochreous beyond the cell, the costa and termen indistinctly dark-spotted throughout; from the costal spots, obscure, outwardly oblique, more or less continuous dark lines are traceable across the wing—these are more conspicuous on the paler terminal area; the dark fuscous scaling is somewhat concentrated on the fold, forming a trapezoidal patch toward the end of the cell, and followed by yellowish ochreous scaling in the form of a triangular dorsal patch; cilia brownish fuscous. *Exp. al.* 22 mm. *Hindwings* rather dark fuscous; cilia fuscous, with a paler line along their base. *Abdomen* hairy, dark fuscous; *genitalia*, uncus double, evenly curved over, not reaching beyond the ends of the claspers, which are rather broad at the base, becoming abruptly excised on their lower margin before the middle, thence bowed-in, and somewhat narrow, terminal margins rounded. *Legs* fawn-ochreous (broken).

*Type* ♂ (67031, *Senahu*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab. Central America*—GUATEMALA: ALTA VERA PAZ: *Senahu*, 2800 ft., XI. 1879 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 6000–7000 ft., 1881–2 (*G. C. Champion*). Two specimens.

#### 42. *Acrolophus invida*, sp. n., Drnt.

*Antennae* ♂ serrate, brownish ochreous. *Palpi* strongly recurved, overarching the thorax, strongly hirsute throughout; brownish fuscous. *Head* and *Thorax* brownish fuscous. *Forewings* brownish ochreous with lilac sheen, and with ill-defined dark purplish fuscous markings; from dark fuscous spots along the costa arise oblique broken lines, these are obscured toward the dorsum, on and below the cell, by dark purplish fuscous suffusion, which is perhaps most pronounced along the fold; cilia brownish ochreous, with a fuscous line along the termen at their base. *Exp. al.* 28 mm. *Hindwings* dark fuscous, somewhat aeneous-tinged; cilia slightly paler. *Abdomen* dark fuscous: *genitalia*, uncus double, divergent beneath, triangular, the outer margin excavate, not reaching beyond the slightly spoon-shaped claspers, which are scarcely dilated posteriorly. *Legs* (broken).

*Type* ♂ (67020) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab. PANAMA*: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). Unique.

Though somewhat obscurely marked, this species should be easily recognised by the lilac sheen on the paler parts of the wing and its dark purplish fuscous suffusion.

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43. *Acrolophus damina*, sp. n.

*Antennae* serrate, minutely ciliate; pale brownish. *Palpi* overarching the thorax, roughly clothed; pale fawn-brown. *Head* and *Thorax* brownish fuscous. *Forewings* pale fawn-brown, with a few scattered costal spots, a small transverse spot at the end of the cell, and a slight shade on the cell at one-third from the base, dark brownish fuscous, the plical patch being apparently obsolete; cilia pale fawn-brown, tipped with pale brownish cinereous. *Exp. al.* 18 mm. *Hindwings* light brownish fuscous; cilia pale brownish cinereous, with a brownish fuscous shade-line in their basal half. *Abdomen* brownish fuscous: *genitalia*, uncus gently curved, slender, double-pointed; claspers dilated posteriorly, with oblique terminal margin, obtusely rounded at its upper and lower angle. *Legs* pale brownish cinereous, slightly hairy on the tibiae.

*Type* ♂ (67022) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft. (G. C. Champion).  
Unique.

44. *Acrolophus euteles*, sp. n.

*Antennae* smooth above, barred beneath by transverse ridges, slightly projecting on either side of the stem and giving a biserrate appearance; dark brownish. *Palpi* overarching the thorax, roughly clothed and tufted, with a close brush-like tuft projected forward on the basal joint; brownish cinereous, much speckled and shaded with fuscous. *Head* and *Thorax* brownish fuscous. *Forewings* brownish cinereous, partially suffused above the fold with smoky fuscous, and spotted or speckled throughout with dark brownish fuscous, the spots along the costa being especially noticeable—the usual plical and discal patches are ill-defined and almost obsolete; cilia brownish fuscous, slightly speckled. *Exp. al.* 15 mm. *Hindwings* and cilia brownish fuscous. *Abdomen* brownish fuscous: *genitalia*, uncus single, slightly bent; claspers narrow, tapering posteriorly, with a short tooth-like projection on their lower edge. *Legs* smooth; brownish cinereous, with fuscous tarsal annulations.

*Type* ♂ (4654) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: Jalapa, 4500 ft., 1887 (W. Schaus). Unique.

A small species somewhat resembling *minima* Wlsm.

45. *Acrolophus bidens*, sp. n.

*Antennae* serrate, minutely ciliate; brownish cinereous. *Palpi* overarching the thorax; brownish cinereous, sprinkled and shaded with fuscous. *Head* and *Thorax* brownish cinereous. *Forewings* brownish cinereous, with a series of dark fuscous spots along the costa, some produced downward in short streaklets; a dark fuscous, somewhat broken, plical patch, scarcely disconnected from the first and second discal patches, which are somewhat smaller; an anteterminal spot is produced obliquely inward, in a broken shade toward the fold, the dorsum and termen are also somewhat speckled with dark scales; cilia brownish cinereous, suffused with pale fuscous. *Exp. al.* 24–4 mm. *Hindwings* brownish; cilia brownish cinereous. *Abdomen* greyish fuscous: *genitalia*, uncus double, the points widely divergent, but not so long as the points produced backward from the angles of deflection; claspers widened beyond the middle, spoon-shaped, obtusely rounded posteriorly. *Legs* moderately smooth; brownish cinereous.

*Type* ♂ (67033, Durango) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (67035) US. Nat. Mus.]

*Hab.* Central America—MEXICO: DURANGO: Durango (A. Forrer)—NICARAGUA: Chontales (E. M. Janson)—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft., 1881–3 (G. C. Champion). Four specimens.

The peculiar form of the uncus separates this species from its allies.

46. *Acrolophus synapta*, sp. n., Drnt.

*Antennae* ♂ simple, fawn-ochreous. *Palpi* ♂ recurved, reaching beyond the middle of the thorax, densely pilose and tufted; ♀ porrect, densely hairy; fawn-ochreous, with some admixture of fuscous. *Head* and *Thorax* fawn-ochreous, mixed with fuscous. *Forewings* fawn-ochreous, with oblique brownish fuscous strigulae, arising from costal spots, and with some fuscous suffusion in the cell, connected with two trapezoidal patches in the fold, one below the end of the cell, the other toward the base; cilia fawn-ochreous, with a darker line running through them. *Exp. al.* 23-8 mm. *Hindwings* brownish fuscous; cilia with a pale line along their base. *Abdomen* fuscous: *genitalia*, uncus double, triangular, outer margin excavate, reaching beyond the rather broad cultrate claspers. *Legs* fawn-ochreous.

*Type* ♂ (67037); ♀ (67038) Teapa, Mus. Wlsm. (Godm-Salv. Coll.) BM. [PT. (67040-1) US. Nat. Mus.]

*Hab.* MEXICO: TABASCO: Teapa, II. (H. H. Smith). Five specimens.

The ♀ is larger and somewhat darker than the ♂; FW. 8-9 stalked in both sexes.

47. *Acrolophus maculisecta* Busck.

*Acrolophus maculisecta* Busck Ins. Insc. Mens. 1 143 (1913)<sup>1</sup>.

*Type* ♂ (16667) US. Nat. Mus.

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Misantla, VIII. (R. Müller)<sup>1</sup>.

48. *Acrolophus fumida*, sp. n.

*Antennae* serrate and minutely ciliate; brownish cinereous. *Palpi* overarching to the back of the thorax, densely clothed, the scales increasing in length to the ends of the joints; smoky fuscous, with a slight purplish tinge. *Head* and *Thorax* smoky fuscous, with a slight purplish tinge. *Forewings* smoky fuscous, with a slight purplish tinge, the markings entirely obliterated by a somewhat darker shade along the cell, the anteterminal patch reduced to a small spot, the usual costal strigulae scarcely traceable; cilia brownish cinereous, with a fuscous marginal shade along their base, less intensely reduplicated on their middle. *Exp. al.* 28-34 mm. *Hindwings* brownish fuscous; cilia paler, shaded along their middle. *Abdomen* somewhat pilose, greyish fuscous: *genitalia*, uncus bent, not angulated, double; claspers dilated posteriorly, the abruptly truncate terminal margin slightly convex. *Legs* brownish cinereous, with densely packed, long, appressed scales.

*Type* ♂ (67047); ♀ (67048) Mus. Wlsm. (Godm-Salv. Coll.) BM. [PTT. (67049-50) US. Nat. Mus.]

*Hab.* COSTA RICA: Candelaria Mts. (C. A. Underwood). Four specimens.

The ♀ has hairy porrect palpi, reaching to twice the length of the head beyond it.

49. *Acrolophus prepodes*, sp. n.

*Antennae* simple, minutely ciliate; yellowish brown. *Palpi* overarching the thorax, densely clothed throughout; brownish cinereous, sprinkled with fuscous, the points of the hair-scales on the terminal joints pale cinereous. *Head* and *Thorax* brownish cinereous, mixed with fuscous. *Forewings* pale brownish cinereous, sparsely dusted with fuscous, the margins narrowly shaded with fuscous throughout, except for some pale interruptions along the outer half of the costa; the usual discal and plical patches are scarcely indicated by fuscous shading, but the one at the end of the cell is very dark, almost black, placed transversely and somewhat oblique, a line of diffused similar dark scales connecting it with the tornus; cilia brownish cinereous, much shaded with fuscous, but without any defined pale or dark lines. *Exp. al.* 26 mm. *Hindwings* reddish brown; cilia rather paler. *Abdomen* reddish brown, somewhat hairy, the segments marked by pale brownish cinereous lines: *genitalia*, uncus double, gently curved to

the ends of the spoon-shaped claspers, which are rounded, but scarcely dilated posteriorly. *Legs* hairy throughout; pale cinereous, dusted with fuscous.

*Type* ♂ (66961) Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.** [*PT.* (66963) US. Nat. Mus.]

*Hab.* MEXICO: GUERRERO: Tonalapa, VI. (*H. H. Smith*). Three specimens.

Veins 8 and 9 are stalked in the forewings.

### 50. *Acrolophus arcei* Druce.

*Anaphora arcei* Druce Ann-Mag. NH. (7 s.) 7 442 (1901)<sup>1</sup>.

The antennae of the ♂ of this species are serrate, and minutely ciliate; the palpi overarch the thorax, and are roughly and distinctly tufted on each joint; the hind legs are hairy, except on the terminal joints of the tarsi. *Genitalia*: the uncus is somewhat angulate, double, with the points diverging, but the angle at the bend is rounded-off, not produced; the claspers are dilated posteriorly, inverted at the upper angle of their apex, excavate on their posterior margin, and produced into a somewhat broad lobe at the lower extremity.

*Type* ♂ (4550); ♀ (4551) Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).

*Hab.* Central America<sup>1</sup>—MEXICO: VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*)—PANAMA<sup>1</sup>: CHIRIQUI (*Arcé*)<sup>1</sup>.

### 51. *Acrolophus uncispinis*, sp. n.

=\**Anaphora punctata* (p.) Druce Ann-Mag. NH. (7 s.) 7 443 (1901)<sup>1</sup>.

*Antennae* serrate, yellowish brown. *Palpi* overarching the thorax, thickly clothed throughout; brownish fuscous, the brush on the basal joint brownish ochreous. *Head* and *Thorax* brownish fuscous. *Forewings* with the ground-colour pale whitish ochreous, but almost completely suffused—except along and below the fold, and in a streak along the outer half of, and beyond, the cell—with fuscous, slightly tinged with purplish, on which are numerous small spots and strigulae of a still darker fuscous shade; the pale space below the fold is also somewhat sprinkled with these darker scales, and the plical patch is indicated by them on the fold, the other patches being obliterated and scarcely traceable; cilia pale dirty whitish ochreous, dusted with pale fuscous. *Exp. al.* 25–36 mm. *Hindwings* pale brownish fuscous, diluted to whitish ochreous about their base and on the cilia, through which runs a faint darker shade-line. *Abdomen* pale brownish fuscous: *genitalia*, uncus double, angular, the upper angle projecting to a length about equal with that of the lower point, and reaching as far as the ends of the claspers; these have their upper edge straight, but are dilated and rounded posteriorly beneath, terminating upward obtusely. *Legs* smooth; pale brownish cinereous.

*Type* ♂ (66984); ♀ (66985) *V. de Irazu*, Mus. Wlsm. (*Godm-Salv. Coll.*) **BM.** [*PTT.* (6992–4, 67000, 67008–9) US. Nat. Mus.; (4498–9) Wlsm. Det. 1904) Mus. J. de Joannis; (\**punctata* Druce, *PT.*, 4556) Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).]

*Hab.* Central America—GUATEMALA: SAN MARCOS: El Tumbador, 2500 ft., X–XI. 1880 (*G. C. Champion*)—NICARAGUA: Chontales (*E. M. Janson*)—COSTA RICA<sup>1</sup>: Volcan de Irazu, 6000–7000 ft. (*H. Rogers*); Candelaria Mts. (*C. A. Underwood*)<sup>1</sup>; San José (*Mus. Joannis*). Thirty-two specimens.

The ♀ is larger than the ♂, with very hairy palpi, which extend rather more than the length of the head beyond it. This species is extremely similar to *popeanella* Clms. and to *caprimulgus* Wlsm., but differs from both in the peculiar form of the uncus with its strongly projected upper angle.

The Paratype of *Anaphora punctata* Druce, from Candelaria Mts. (*Underwood*)<sup>1</sup> (♂ 4556 Wlsm. Det. 1904), must be referred to *uncispinis* Wlsm.—Wlsm. MS. 812/1904.

## 52. *Acrolophus orasialis* Wkr.

*Palthis? orasialis* Wkr. Cat. Lp. BM. 19 886 (1859)<sup>1</sup>.

Type ♂ (1357) BM.

*Hab.* BRITISH HONDURAS [= \**HONDURAS*<sup>1</sup> (*Miller*)<sup>1</sup>].

## 53. *Acrolophus caprimulgus*, sp. n.

*Antennae* serrate; brownish. *Palpi* overarching the thorax, densely clothed, tufted; brownish fuscous. *Head* and *Thorax* brownish fuscous. *Forewings* brownish ochreous, much suffused with dark brownish fuscous, except in a pale streak running along the fold, and in a shorter streak from the end of the cell, pointing toward the middle of the termen; the basal half of the costa and the whole of the cell very darkly suffused, and a dark excrescence from the central shade is thrown across the fold, forming the plical patch; on the outer half of the wing the pale ground-colour is slightly more apparent, showing three or four dark, confluent, costal streaks, the space below the fold being also shaded with fuscous; there is a slight admixture of dark ferruginous brown scales on the sites of the discal and plical patches, but the anteterminal patch is undistinguishable; cilia brownish cinereous, with a reduplicated dark shade-line. *Exp. al.* 26–32 mm. *Hindwings* pale fawn-brownish; cilia paler cinereous, with a shade-line running through them. *Abdomen* brownish cinereous, banded with dark brownish fuscous: *genitalia*, uncus double, short, angular, the angle not produced; claspers moderately wide, truncate, their slightly oblique posterior margin indented in the middle. *Legs* brownish cinereous, clothed with long, densely packed, hair-scales, except on the terminal joints of the tarsi.

Type ♂ (67043); ♀ (67044) *V. de Chiriqui*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (67046) US. Nat. Mus.]

*Hab.* PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*): PANAMA: La Chorrera, IV–V. 1898 (*C. H. Dolby-Tyler*). Five specimens.

The ♀ has hairy erect palpi, rising scarcely above the base of the antennae.

## 54. *Acrolophus dentiger*, sp. n.

*Antennae* serrate, minutely ciliate; brownish fuscous. *Palpi* overarching the thorax, densely clothed and tufted; brownish cinereous, shaded with fuscous externally, the terminal joint sprinkled with pale-tipped scales. *Head* and *Thorax* brownish fuscous. *Forewings* pale brownish cinereous, evenly dusted and sprinkled with dark brownish fuscous, the usual discal, plical, and submarginal patches indicated by a thicker agglomeration of the same, the first discal being smeared nearly to the base; the fold, before and around the plical patch, shows the pale ground-colour scarcely obscured, and there is a somewhat clear streak of the same beyond the cell, but the amount of fuscous suffusion between the almost reticulate darker speckling is variable; the ultra-discal streak has a slight ochreous tinge; cilia brownish cinereous, with a median fuscous shade. *Exp. al.* 28–37 mm. *Hindwings* brownish fuscous; cilia pale brownish cinereous, with a median fuscous shade. *Abdomen* brownish fuscous: *genitalia*, uncus double, rather abruptly curved, but not angulate; claspers elongate, spoon-shaped, rounded posteriorly, with a strong inverted tooth about the middle of their lower edge. *Legs* brownish cinereous, with long closely laid scales.

Type ♂ (66978); ♀ (4631) *Jalapa*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (4629, 4632, 4634, 66980) US. Nat. Mus.]



*Hab. Central America*—MEXICO: VERA CRUZ: Jalapa, 4500 ft. (*M. Trujillo*; *W. Schaus*); Coatepec (*J. Brooks*)—COSTA RICA: Candelaria Mts. (*C. A. Underwood*). Fourteen specimens.

The ♀ is larger than the ♂, with obliquely porrect hairy palpi, extending scarcely twice the length of the head beyond it. In the ♀ Type the ultra-discal streak is brownish ochreous, extending backward to the middle of the cell, and scarcely interrupted by the almost obsolete outer discal patch; the plical streak is also distinctly brownish ochreous.

### 55. *Acrolophus numidia* Druce.

=*orizabae* Dyar.

*Anaphora numidia* Druce Ann-Mag. NH. (7 s.) 7 442 (1901)<sup>1</sup>. *Anaphora orizabae* Dyar Jr. NY. Ent. Soc. 15:1907 52-3 (1907)<sup>2</sup>.

*Types*: *numidia* Druce ♂ (*Orizaba*, 4545 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*); *orizabae* Dyar ♂ ♀ (10159, *Orizaba*) US. Nat. Mus.

*Hab.* MEXICO<sup>1-2</sup>: VERA CRUZ<sup>1-2</sup>: Jalapa, 4500 ft. (*W. Schaus*; *M. Trujillo*); Coatepec (*J. Brooks*); Orizaba (*Boucard*)<sup>1</sup>, VIII. 1906 (*R. Müller*)<sup>2</sup>.

The coloration of this species is quite normal, the dark, somewhat triangular, patch being clearly defined on either side by projections from the paler dorsal space beneath it; the space beyond the smaller patch, at the end of the cell, is also paler than the general ground-colour, a few dark striae, scarcely amounting to spots, alone indicating the anteterminal shade. In the ♂ the uncus is slightly deflected, double, and with a rather pronounced rounded bend, not projecting beyond its points; the claspers are spoon-shaped, inverted, and with a strong inverted hook projecting from the underside at half their length.

*Anaphora numidia* Druce was founded on three specimens: The Type (♂ 4545 Wlsm. Det. 1904) is from Orizaba (*Boucard*), a second specimen from the same locality (♂ 4546 Wlsm. Det. 1904) must be referred to *cathecta* Wlsm., while the third specimen (4549 Drnt. Det. 1904), from Guatemala (*Boucard*), is *trichosoma* Drnt.

### 56. *Acrolophus cathecta*, sp. n.

=\**Anaphora numidia* (p.) Druce Ann-Mag. NH. (7 s.) 7 442 (1901)<sup>1</sup>.

*Antennae* serrate and minutely ciliate; brownish cinereous. *Palpi* overarching the thorax; brownish cinereous. *Head* and *Thorax* brownish cinereous, shaded with fuscous. *Forewings* brownish cinereous, suffused with greyish fuscous, and profusely speckled and striated with very dark fuscous; this colour shading the base of the costa and forming an elongate blotch along the middle of the fold, an elongate spot at the end of the cell, an oblique series of spots before the termen, and a series of six or seven indistinct terminal spots from apex to tornus; cilia pale brownish cinereous, somewhat shaded with fuscous, a few fawn-brown scales just beyond the end of the cell. *Exp. al.* 32-40 mm. *Hindwings* greyish brown, faintly rosy-tinged; cilia pale brownish cinereous. *Abdomen* pale brownish cinereous: *genitalia*, uncus bent at right-angles, thickened and rounded at the bend, which does not project beyond

the double points; claspers somewhat thickened in the middle, thence tapering to a narrow, obtuse, apex.

*Legs* pale brownish cinereous, comparatively smooth.

*Type* ♂ (4636); ♀ (4639) *Jalapa*, Mus. Wlsm. BM. [PT. 4637-8, 4660) US. Nat. Mus.; (\**numidia* Druce, PT., 4546 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).]

*Hab.* MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: *Jalapa*, 4500 ft., 1887 (*W. Schaus*); *Coatepec* (*J. Brooks*); *San Juan*, 600 ft., 1887 (*W. Schaus*); *Orizaba* (*Boucard*)<sup>1</sup>. Eleven specimens.

### 57. *Acrolophus crinifrons*, sp. n.

*Antennae* broken, but apparently simple. *Palpi* overarching the thorax; brownish cinereous, the closely scaled basal joint deeply shaded with fuscous externally. *Head* and *Thorax* brownish cinereous. *Forewings* pale brownish cinereous, with a vinous gloss, except along the extreme costa and termen; nearly the whole wing-surface is speckled with fuscous, forming a series of broken costal and dorsal striae, the first discal patch is obsolete, but the one at the end of the cell is distinctly dark brownish fuscous, and the plical patch of the same colour is also conspicuous, both tending to be outlined by an unspotted space of the pale ground-colour; a small dark spot lies halfway between the end of the cell and the termen, and a slight shade is traceable from the outer discal to the tornus; cilia brownish cinereous, somewhat speckled. *Exp. al.* 31-44 mm. *Hindwings* and cilia greyish brown. *Abdomen* greyish fuscous above, pale brownish cinereous beneath: *genitalia*, uncus double, with broad, flat, projecting bulge, above, and considerably beyond, the very short inverted points; claspers broadly spoon-shaped. *Legs* smooth; brownish cinereous.

*Type* ♂ (4664); ♀ (66911) Mus. Wlsm. BM. [PT. (4663) US. Nat. Mus.]

*Hab.* MEXICO: VERA CRUZ: *San Juan*, 600 ft. 1887 (*W. Schaus*); *Cuesta de Misantla* (*M. Trujillo*). Three specimens.

### 58. *Acrolophus scotera*, sp. n.

*Antennae* serrate, minutely ciliate; pale brownish. *Palpi* overarching the thorax; brownish fuscous, speckled on the ends of the tufted joints with pale cinereous. *Head* and *Thorax* brownish fuscous. *Forewings* pale brownish fuscous, mottled with a darker shade of the same, this darker shade appearing more conspicuously in the plical blotch, and in a diffused spot at the end of the cell, also in a transverse broken line of scales from costa to tornus, running parallel to the termen; there is a slight purplish gloss over the wing-surface; cilia concolorous with the paler portions of the ground-colour. *Exp. al.* 32-44 mm. *Hindwings* brownish fuscous; cilia slightly paler. *Abdomen* greyish fuscous, hairy at the base: *genitalia*, uncus with a strong projecting point at the angle of deflection, equal in length to the double points beneath it; claspers inverted, narrowly spoon-shaped, with depressed rounded apex, a strong tooth projecting from before their middle, on the lower edge. *Legs* brownish cinereous.

*Type* ♂ (66912, *Amula*); ♀ (66913, *Durango*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [PT. (66915) US. Nat. Mus.]

*Hab.* MEXICO: DURANGO (*A. Forrer*): GUERRERO: *Amula*, 6000 ft., VIII. (*H. H. Smith*). Four specimens.

### 59. *Acrolophus punctata* Druce.

*Anaphora punctata* Druce Ann-Mag. NH. (7 s) 7 443 (1901)<sup>1</sup>.

This species is characterised by a curved, irregular, dark streak, produced from the lower angle of the cell, which, after approaching the termen below the apex, reverts nearly to the costa, and forms, as it were, a continuous chain with the large and conspicuous dark plical patch. The uncus is double, the points slightly divergent, and at right-angles with the stem, which is somewhat produced and angular at the point of bending, reaching as far as the ends of the spoon-shaped claspers.—Wlsm. MS. 812/1904.

*Type* ♂ (4557 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).

*Hab. Central America*<sup>1</sup>—GUATEMALA: GUATEMALA: Guatemala City (*J. Rodriguez*)—COSTA RICA (*Van Patten*)<sup>1</sup>; Volcan de Irazu, 6000–7000 ft. (*H. Rogers*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*).

*Anaphora punctata* Druce was founded on two specimens: the Type (♂ 4557 Wlsm. Det. 1904) from Costa Rica (*Van Patten*), and a paratype (♂ 4556) from Candelaria Mts., Costa Rica (*Underwood*)—the latter must be referred to *uncispinis* Wlsm.

#### 60. *Acrolophus pauper*, sp. n.

*Antennae* serrate, minutely ciliate; brownish. *Palpi* overarching the thorax, thickly clothed; brownish fuscous, the basal joint dark fuscous externally, and pale brownish cinereous in front on a level with the eyes. *Head* and *Thorax* brownish fuscous. *Forewings* brownish fuscous, somewhat paler, and with a rosy tinge, on and below the fold, except where interrupted by the large, triangular, dark brownish fuscous plical patch, and by a few minute dark upright dorsal strigulae; the discal patches are scarcely disconnected from the upper angles of the plical patch at either end, the one at the end of the cell obliquely placed, diffused and diluted nearly to the tornus; beyond it is an anteterminal series of about five dark fuscous spots, in an outwardly angulated line, a few indistinct spots lying along the termen at the base of the brownish fuscous cilia. *Exp. al.* 33 mm. *Hindwings* greyish brown; cilia brownish cinereous. *Abdomen* brownish cinereous: *genitalia*, uncus double, almost concave posteriorly through the projection, at its angle of deflection, where it is much widened; claspers of even width, with oblique hindmargin, deflected to a subobtuse apex, not reaching as far as the angle of the uncus. *Legs* densely, but not very roughly, clothed; brownish cinereous.

*Type* ♂ (66926) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PT.* (66928) US. Nat. Mus.]

*Hab. MEXICO*: VERA CRUZ: Cordova (*H. Kümeli*). Three specimens.

This species appears to be allied to *punctata* Druce, but differs in the somewhat less distinct dark blotches, in the detachment of the anteterminal spots from the outer discal patch, and, very noticeably, in the form of the uncus, projecting as it does beyond the claspers.

#### 61. *Acrolophus gigantea* Druce.

*Ankistrophorus giganteus* Druce Ann-Mag. NH. (7 s.) 7 441 (1901)<sup>1</sup>.

*Antennae* strongly serrate; pale brownish. *Palpi* recurved to behind the thorax; brownish fuscous, mottled with darker fuscous, especially on the outer side of the basal joint. *Head* and *Thorax* dark fuscous. *Forewings* dark greyish fuscous, with a lilac tinge, the costa narrowly touched with brownish throughout; there are a few dark transverse strigulae, and the usual dark patches are present, the plical indicated by the surrounding paler dorsal area; a small dark anteterminal patch lies in the same line as the larger one at the end of the cell; cilia brownish fuscous. *Exp. al.* 37–59 mm. *Hindwings* very dark umber-brown. *Abdomen* fuscous: *genitalia*, the uncus is angular, but, although the points are at right-angles with the stem, it is somewhat rounded-off at the bend, which projects as far as the ends of the stout widened claspers—these are straightened along their edges, both above and beneath, the upper edge slightly inverted posteriorly; their outer ends are almost straight, but project slightly on their middle. *Legs* greyish fuscous. (♂ 66916, *Atoyac*.) BM.

*Type* ♀ (*Orizaba*, 4527 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).

*Hab. Central America*—MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Jalapa, 4500 ft., 1893 (*W. Schaus*); Atoyac (*H. H. Smith*; *Schumann*); Orizaba (*Boucard*)<sup>1</sup>—COSTA RICA (Mus. J. de Joannis, 5000–1 Wlsm. Det. 1906)—PANAMA: CHIRIQUI: Bugaba, 800–1500 ft., 1881–3 (*G. C. Champion*).

This species invariably possesses a few scattered single white scales, tipped with black—these are very irregularly distributed, but usually to be found, even in worn specimens, above and below the fold. These white scales occur in the Type, as also in seven other specimens examined, including a pale variety from Jalapa (♀ 4740 Mus. Wlsm.) in which the dark blotches are reduced to small, but somewhat clearly defined spots, the one nearest the base being absent.

## 62. *Acrolophus laetifica*, sp. n., Drnt.

*Antennae* serrate; fuscous. *Palpi*, ♂ strongly recurved, overarching to the middle of the thorax, each joint separately tufted; ochreous, shaded with fuscous on the outer side of each joint; ♀ projecting more than the length of the head beyond it, cinereous, or ochreous, outwardly shaded with fuscous. *Head* ochreous, mixed with fuscous. *Thorax* fuscous. *Forewings* elongate; ochreous, shaded with fuscous; the fuscous spots along the costa are more or less distinctly continued across the wing as inwardly oblique strigulae; the usual three spots are traceable, one at about one-third, a second at the end of the cell, and a third plical, but these are connected by a broad fuscous suffusion, which, starting from the first discal, occupies the lower half of the cell and expands to the tornus; the ochreous ground-colour is most noticeable along the dorsum, and toward the apex; cilia ochreous, shaded with fuscous. *Exp al.* 25–34 mm. *Hindwings* fuscous; cilia with a darker line near their base. *Abdomen* fuscous: *genitalia*, uncus double, bent over, the points slender and slightly diverging, not reaching to the ends of the rather slender claspers which are strongly arched upward from the base, their upper margin being bent inward along the descending curve and forming an angle with the outer edge, which is somewhat excavate. *Type* ♂ (66929, *Atoyac*); ♀ (4643, *Jalapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM. [*PTT.* (4627, 4645, 66936–7) US. Nat. Mus.]

*Hab. Central America*—MEXICO: DURANGO: (*A. Forrer*): VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*); San Juan, 600 ft., 1887 (*W. Schaus*); Atoyac, IV (*H. H. Smith*; *Schumann*): GUERRERO: Tierra Colorada, 2000 ft., X. (*H. H. Smith*)—GUATEMALA: ALTA VERA PAZ: Cahabon, 800 ft., II. 1880 (*G. C. Champion*). Seventeen specimens.

The ♀ is larger and darker than the ♂, and the spots are usually not very noticeable, but in a single pale ochreous ♀ (66935, *Atoyac*) the strigulation is slight and the spots are more conspicuous than in the ♂—FW: 8–9 are stalked in both sexes.

## [NOCTUIDAE (*SARROTHRIPINAE*).

### SARROTHRIPUS Crt.

#### *Sarrothripus revayana* Scp.

n. syn. = *underwoodi* Druce.

*Phalaena revayana* Scp. Ann. NH. 5 116, sp. 130 (1772)<sup>1</sup>. *Sarrothripus undulana* Meyr. HB. Br. Lp. 34–5 (1895)<sup>2</sup>. *Sarrothripus revayana* Stgr-Rbl. Cat. Lp. Pal. 1 361 sp. 4126 (1901)<sup>3</sup>. *Acrolophus? underwoodi* Druce Ann-Mag. NH. (7 s.) 7 442 (1901)<sup>4</sup>. *Nycteola revayana* Dyar Bull. US. Nat. Mus. 52 248 sp. 3083 (1902)<sup>5</sup>. *Sarrothripus revayana* Hmsn. Cat. Lp-Phal. BM. 11 265–6 sp. 6539 tf. 96 (1912)<sup>6</sup>.

*Type*: ♂ *underwoodi* Druce (4539 Wlsm. Det. 1904) Mus. J. J. Joicey (*Witley*).

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*Hab.* AFRICA, N.<sup>6</sup>. EUROPE<sup>1-3, 5-6</sup>. ASIA<sup>2-3, 6</sup>. AMERICA, N-C.<sup>4-6</sup>. Canada<sup>6</sup>. United States<sup>5-6</sup>. Central America<sup>4</sup>—COSTA RICA<sup>4</sup>; Candelaria Mts. (*C. A. Underwood*)<sup>4</sup>.

“This is not an Anaphorid as supposed by Mr. Druce: it has the neurulation of *Sarrothripus* Crt. as described by Meyrick.”—Wlsm. MS. 808/1904.

“The Type of *Acrolophus? underwoodi* Druce is a brownish form of *Sarrothripus revayana* Scp., with diffused black fascia below the cell, and some black in the end of the cell.”—G. F. Hampson, VII. 1914.]

## Fam. 21. NEMOPHORIDAE.

=†*NEMOPHORIDA* Leach (1815); ‡*NEMATOPHOROIDAE* Agassiz (1846); =*ADELIDAE* Hnmn. (1870).

### ADELA Ltr.

=*CAPILLARIA* Hw.; =*METALLITIS* Sdf.; =*AEDILIS* Gistel; =*DICTE* Chmb.

Type 1: *Phalaena Tinea reaumurella* L. (Ltr. 1802-10).

ADELA Ltr. [Préc. Char. Ins. 147 no. 18 (1796) *MN.*] : HN. Crust-Ins. 3 417 (1802) : 14 253-4 no. 456 sp. 1-3 (1804-5) : Nouv. Dict. HN. 1 106, 275-6 (1803) : 24 Tbl. Méth. 187, 200 no. 499 (1804) : Gn. Crust-Ins. 4 224 no. 614 (1809) : Cons-Gén. Crust-Ins. 364, 441 no. 588 (1810). *CAPILLARIA* Hw. Lp. Br. 519-23 no. 28 sp. 1-11 (1828). *METALLITIS* Sdf. Bull. Soc. Imp. Nat. Mosc. 10 : 1837 (6) 95, 97, (7) 130 no. 157 (1837). *AEDILIS* Gistel Naturg. Thierr. p. viii (1848). ADELA Meyr. Gn. Ins. Wytsm. 133 2, 8-10 no. 6 sp. 1-36 Pf. [1] · 11-13 (1912).

Type 2: *Adela ridingsella* Clms. (= *corruscifasciella* Chmb.; Chmb. 1873).

DICTE Chmb. Can. Ent. 5 73-4 (1873) : 9 207 (1877) : 11 125-6 (1879).

CAUCHAS Z. [Isis 32 : 1839 186 sp. 1-3 (1839) : Linn. Ent. 8 2, 3-12 sp. 1-4 (1853) —Type: *fibulella* S-D., F.] may be separated from *Nemophora* Hfmsg. [Illiger's Käfer Preuss. 499 no. 176 (1798); Leach, Brewster's Edinb. Encycl. 9 133 no. 452 (1815)—Type: *degeerella* L.; Leach (1815)] and from *Adela* Ltr. by veins 5-7 of the Hindwings being all separate.

§*Nemophora* Hb. (1826) has only one synonym, §*Nematopogon* Z. (1839), but as this is homonymous with †*Nemapogon* Schrank (1802), corrected to *Nematopogon* by Agassiz (1846), the new name **SCAEOTES** Drnt. (Type: *swammerdamella* L.) has been proposed [Lp. B.O.U. & Wollaston Expedns. Dutch New Guinea 161-2 (1915)].

### 1. *Adela aethiops* F. & R. (Tab. X. fig. 32.)

*Adela aethiops* F. & R. Reise Nov. Zool-Lp. 2 Pf. 139 · 1 (1875)<sup>1</sup>; Meyr. Pr. Linn. Soc. NSW. 17 (2 s. 7 : 1892) 486 (1893)<sup>2</sup>; Gn. Ins. Wytsm. 133 9 sp. 7 (1912)<sup>3</sup>.

*Antennae* ♂ 3; white, the basal joint bright purple, thence for a short distance annulate with fuscous, the



annulations dying off in a series of lateral spots. *Palpi* small, drooping; cinereous. *Head* and *Thorax* dark tawny fuscous, with greenish and purplish reflections. *Forewings* elongate, narrow; dark tawny purplish, with three bright steel-blue metallic transverse lines beyond the middle; the first, from the commencement of the costal to the beginning of the dorsal cilia; the third, rather more than half-way from this to the apex of the wing; the second midway between them; the outer line is broken toward the dorsum into spots lying between the veins, each tinged with rosy-red, and a series of about five steel-blue spots lies nearer to the apex, of which the three lower spots (scarcely above the middle of the termen) are also tinged with rosy—there is also a very small spot at the apex; cilia reddish grey, with a brown line along their base. *Exp. al.* 13–17 mm. *Hindwings* dark tawny fuscous; cilia greyish. *Abdomen* dark tawny fuscous. *Legs* purplish, the hind tarsi white above.

*Type* ♂ (400165) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* Central America<sup>3</sup> [=“Australia”]<sup>1</sup>—MEXICO: VERA CRUZ: Coatepec (*J. Brooks*)  
—GUATEMALA: ALTA VERA PAZ: Cubilguitz, 1050 ft., III. 1880 (*G. C. Champion*).

This species is wrongly recorded from “Australia (*Angas*)” in the *Reise Novara*.

## 2. *Adela astrella*, sp. n. (Tab. X. fig. 34.)

*Antennae* ♂, 3, somewhat enlarged, with appressed coppery scales at the base, silvery whitish beyond. *Palpi* short, dependent, with bristles projecting beyond the terminal joint; metallic. *Haustellum* long, brassy golden at the base. *Head* somewhat hairy, black; face brassy greenish. *Thorax* brassy greenish. *Forewings* shining brassy to beyond the middle, having a greenish tinge, except toward the costa where they become coppery; beyond the middle is a pale, shining, ochreous transverse band, bending outward at its middle and margined externally by a line of rich purple scales (attenuated and nearly evanescent except toward the margins) carrying shining golden and silvery scales along its outer edge; beyond this is a costal streak of silvery greenish metallic scales, margined very narrowly with purple, and extending parallel with the preceding band as far as half the width of the wing, then broken and reproduced to the dorsum, above which is a spot of rich purple scales—only on its outer side; a similar costal streak precedes the apex, on which is a series of four silvery spots along the margin, each associated with a few purplish scales, the intermediate spaces between these streaks being of the same shining ochreous colour as the ultramedian band; cilia bright brassy metallic. *Exp. al.* 13 mm. *Hindwings* purplish grey; cilia rather shining brassy. *Abdomen* shining fuscous, slightly bronzy. *Legs* cupreous, with long hairs above the hind tibiae; the tarsi also cupreous, with shining silvery spots at the joints.

*Type* ♂ (67076) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

## 3. *Adela lithopola*, sp. n. (Tab. X. fig. 33.)

*Antennae* thickened on the basal half in the ♀; dark purplish. *Palpi* very short; black. *Head* and *Thorax* dark purplish cupreous. *Forewings* shining, metallic golden-bronzy, deepening to dark purplish toward the costa; a little beyond the middle these colours fade into a pale golden-yellow transverse band, externally margined by a black line, on the other side of which is a narrower silvery band, margined only toward the costa by a black line; this is followed by a short, outwardly oblique, black costal streaklet, forming the inner margin of a small silvery spot; the apical third is purplish cupreous, enclosing a small pale golden-yellow patch at the apex, in which are two black dots, one at the extreme apex, the other on the costa above and before it. *Exp. al.* 11 mm. *Hindwings* and cilia purplish bronzy. *Abdomen* and *Legs* purplish fuscous.

*Type* ♀ (4723) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*). Unique.

4. *Adela ridingsella* Clms. (Tab. X. fig. 35.)

=*corruscifasciella* Chmb.<sup>9</sup>; = *schlaegeri* Z.<sup>9</sup>

*Adela ridingsella* Clms. Pr. Ent. Soc. Phil. 2 425, 426 (1864)<sup>1</sup>; Clms-Stn. Tin. N-Am. pp. viii, 249, 250 (1872)<sup>2</sup>. *Dicte corruscifasciella* Chmb. Can. Ent. 5 74 (IV. 1873)<sup>3</sup>. *Adela schlaegeri* Z. Verh. ZB. Ges. Wien 23:1873 Abh. 227-8 Pf. 3·11 (1873)<sup>4</sup>. *Dicte (Adela) corruscifasciella* Chmb. Can. Ent. 9 207 (1877)<sup>5</sup>; 11 125-6 (1879)<sup>6</sup>. *Adela (Dicte) corruscifasciella* Chmb. Bull. US. GG. Surv. 4 127 (1878)<sup>7</sup>. *Adela ridingsella* Chmb. Bull. US. GG. Surv. 4 127 (1878)<sup>8</sup>; Wlsm. Pr. Z. Soc. Lond. 1880 79 (1880)<sup>9</sup>; Tr. Am. Ent. Soc. 10 172 (1882)<sup>10</sup>; US. Dp. Agr. (Div. Ent.) Ins. Life 2 285 (1890)<sup>11</sup>; Dyar Bull. US. Nat. Mus. 52 575 sp. 6558 (1902)<sup>12</sup>; Busck Pr. Ent. Soc. Wash. 5 217 (1903)<sup>13</sup>; Meyr. Gn. Ins. Wytms. 133 9 sp. 1 (1912)<sup>14</sup>.

*Types: ridingsella* Clms. (Am. Ent. Soc. Coll.) Ac. Nat-Sc. Phil. [*PT.* ♂ (36023) Mus. Wlsm. BM.]; *schlaegeri* Z. ♂ (102248) Mus. Wlsm. BM.

*Hab.* AMERICA, N-C. United States<sup>1-14</sup>—ATLANTIC STATES<sup>12</sup>—VIRGINIA<sup>1-2</sup>—OHIO<sup>4</sup>—KENTUCKY<sup>3</sup>. Central America—MEXICO: VERA CRUZ: Cordova, V. 1908 (*F. Knab*)—GUATEMALA: ALTA VERA PAZ: Lanquin, 1000 ft., 12-28.II.1880 (*G. C. Champion*); Chiacam, II-III. 1880 (*G. C. Champion*).

## S U P P L E M E N T.

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THIS Supplement includes various corrections of synonymy, and additions to the list of genera and species of Tineina described or recorded from Central America after the pages dealing with the families to which they belong had been sent to press.—Drnt.

### Fam. 1. LAVERNIDAE (pp. 1-18).

The family name *Lavernidae* was first published by Wocke in the 1871 edition of Staudinger's Catalog (pp. 318-21), and described in the concluding part of Heinemann's Schmetterlinge Deutschlands (1876), to include genera 480-92 (pp. 415-35). These genera are still associated together, in the same family, with *Cosmoptyx* Hb., which Wocke separated from the *Elachistidae* and for which he formed a new family, the *Cosmoptyrigidae* [Hein-Wk. Schm. Deutsch. Kleinschm. 2 520-3 (1876)] —cf. Busck, Smithson. Misc. Coll. 59 (4) 1-2 (1912).

#### URANGELA Busck.

Type: *Urangela pygmaea* Busck (Busck 1912).

URANGELA Busck, Smithson. Misc. Coll. 59 (4) 2-3 (1912).

#### 1. *Urangela pygmaea* Busck.

*Urangela pygmaea* Busck, Smithson. Misc. Coll. 59 (4) 2-3 (1912)<sup>1</sup>.

Type ♂ (14529) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello (*A. Busck*)<sup>1</sup>.

#### ERITARBES Wlsm. (p. 7).

#### 2. *Eritarbes guttata* Busck.

*Eritarbes guttata* Busck Pr. US. Nat. Mus. 47 1 (1914)<sup>1</sup>.

Type ♂ (16668) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Cabima and La Chorrera, V-VI. (*A. Busck*)<sup>1</sup>.

**MORILOMA** Busck.Type: *Moriloma pardella* Busck (Busck 1912).*MORILOMA* Busck, *Smithson. Misc. Coll.* **59** (4) 3-4 (1912).**1. Moriloma pardella** Busck.*Moriloma pardella* Busck, *Smithson. Misc. Coll.* **59** (4) 3-4 (1912) <sup>1</sup>.Type ♂ (14530) US. Nat. Mus. [*PTT.* (33924-5) Mus. Wlsm. **BM.**]*Hab.* PANAMA <sup>1</sup>: Porto Bello (*A. Busck*) <sup>1</sup>.**WALSHIA** Clms. (pp. 14-15).**3. Walshia albicornella** Busck.*Walshia albicornella* Busck *Pr. US. Nat. Mus.* **47** 2 (1914) <sup>1</sup>.

Type ♂ (15813) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Paraiso and La Chorrera, II, V. (*A. Busck*) <sup>1</sup>.**PERIMEDE** Chmb. (p. 18).**2. Perimede annulata** Busck.*Perimede annulata* Busck *Pr. US. Nat. Mus.* **47** 2 (1914) <sup>1</sup>.

Type ♂ (15814) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: CANAL ZONE <sup>1</sup>: Corozal and Paraiso, III, V. (*A. Busck*) <sup>1</sup>.**Fam. 2. GELECHIADAE** (pp. 18-116).**FORTINEA** Busck.Type: *Fortinea auriciliella* Busck (Busck 1914).*FORTINEA* Busck *Pr. US. Nat. Mus.* **47** 3 (1914).**1. Fortinea auriciliella** Busck.*Fortinea auriciliella* Busck *Pr. US. Nat. Mus.* **47** 3 (1914) <sup>1</sup>.

Type ♂ (15815) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Porto Bello, V. (*A. Busck*) <sup>1</sup>.**BELTHECA** Busck.Type: *Belthea picolella* Busck (Busck 1914).*BELTHECA* Busck *Pr. US. Nat. Mus.* **47** 4-5 (1914).**1. Belthea picolella** Busck.*Belthea picolella* Busck *Pr. US. Nat. Mus.* **47** 5 (1914) <sup>1</sup>.

Type ♂ (16669) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Cabima, V. (*A. Busck*) <sup>1</sup>.

## ARISTOTELIA Hb. (pp. 22-6).

= *DORYPHORELLA* Ckrl.Type 5: *Anacampsis pulveratella* HS.*Xystophora* Hnmn-Wk. (1876) = *DORYPHORELLA* Ckrl. Ent. 21 163 (1888) nn. = § *DORYPHORA* Hnmn. (1870).7. *Aristotelia sarcodes* Wlsm. (p. 26)<sup>1</sup>.*Hab.* PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: Paraiso, II. 1911 (*A. Busck*).

## GALTICA Busck.

Type: *Galtica venosa* Busck (Busck 1914).*GALTICA* Busck Pr. US. Nat. Mus. 47 6-7 (1914).1. *Galtica venosa* Busck.*Galtica venosa* Busck Pr. US. Nat. Mus. 47 6-7 (1914)<sup>1</sup>.

Type ♂ (15817) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, IV. (*A. Busck*)<sup>1</sup>.

## ANACAMPSIS Crt. (pp. 33-43).

24. *Anacampsis? veteranella* Z. (p. 43).Three specimens received from Staudinger, in 1891, as *Tachyptilia veteranella* Z. (Mus. Wlsm. 6645-7) belong to the genus *Aristotelia*, but the shape of the wings is different from Zeller's figure of his species, and the markings do not agree.25 (16.1). *Anacampsis peculella* Busck.*Anacampsis peculella* Busck Pr. US. Nat. Mus. 47 7 (1914)<sup>1</sup>.

Type ♂ (15818) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Paraiso, Porto Bello, Trinidad River, and La Chorrera, II-V. (*A. Busck*)<sup>1</sup>.26. *Anacampsis lagunculariella* Busck.*Anacampsis lagunculariella* Busck Pr. US. Nat. Mus. 23 230-1 Pf. 1.6 (1900)<sup>1</sup>; Dyar Pr. Ent. Soc. Wash. 4 474 (1901)<sup>2</sup>; Busck Bull. US. Nat. Mus. 52 510 sp. 5706 (1902)<sup>3</sup>; Pr. US. Nat. Mus. 25 845, 848 (1903)<sup>4</sup>; 47 7 (1914)<sup>5</sup>.Typ ♂ (4937, *Palm Beach*) US. Nat. Mus.*Hab.* AMERICA, N-C. United States<sup>1-5</sup>—FLORIDA<sup>1-5</sup>: Palm Beach, ⊕ *Laguncularia racemosa* (*H. G. Dyar*)<sup>1-2, 4-5</sup>. Central America<sup>5</sup>—PANAMA<sup>5</sup>: Corozal and La Chorrera, IV-V. (*A. Busck*)<sup>5</sup>.



27. **Anacampsis dorsalis** Busck.*Anacampsis dorsalis* Busck Pr. US. Nat. Mus. 47 8 (1914)<sup>1</sup>.

Type ♂ (15819) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Trinidad River, Porto Bello, and La Chorrera, IV-VI. (*A. Busck*)<sup>1</sup>.28. **Anacampsis phytomiella** Busck.*Anacampsis phytomiella* Busck Pr. US. Nat. Mus. 47 8-9 (1914)<sup>1</sup>.

Type ♂ (15820) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Alhajuela, Cabima, and Porto Bello, III-VI. (*A. Busck*)<sup>1</sup>.29. **Anacampsis bistrigella** Busck.*Anacampsis bistrigella* Busck Pr. US. Nat. Mus. 47 9 (1914)<sup>1</sup>.

Type ♂ (15822) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Alhajuela and Cabima, IV-V. (*A. Busck*)<sup>1</sup>.30. **Anacampsis unistrigella** Busck.*Anacampsis unistrigella* Busck Pr. US. Nat. Mus. 47 9 (1914)<sup>1</sup>.

Type ♂ (15821) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: TABOGA I.<sup>1</sup>: VI. (*A. Busck*)<sup>1</sup>.31. **Anacampsis curtella** Busck.*Anacampsis curtella* Busck Pr. US. Nat. Mus. 47 10 (1914)<sup>1</sup>.

Type ♂ (15823) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Trinidad River, VI. (*A. Busck*)<sup>1</sup>.32. **Anacampsis terrenella** Busck.*Anacampsis terrenella* Busck Pr. US. Nat. Mus. 47 10 (1914)<sup>1</sup>.

Type ♂ (16671) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello, V. (*A. Busck*)<sup>1</sup>.

## LATHONTOGENUS Wlsm.

= *PARASPISTES* Meyr. (†*PARASPISTIS* Busck); = *LIPATIA* Busck.Type: *Gelechia palpigera* Wlsm. (= *adustipennis* Wlsm.; Wlsm. 1897: = *ioloncha* Meyr.; Meyr. 1905: = *crotolariella* Busck; Busck 1910).LATHONTOGENUS Wlsm. Pr. Z. Soc. Lond. 1897 87-8 no. 25 sp. 79 (1897). *PARASPISTES* Meyr. Jr. Bomb. NH. Soc. 16 600 (1905). "*LIPATIA* Busck Bull. Dp. Agr. Trinidad 9 243 (1910)."  
†*PARASPISTIS* Busck Pr. US. Nat. Mus. 47 10-11 (1914).

[The Bulletin of the Department of Agriculture, Trinidad, is not in the Library of the British Museum (Nat. Hist.), and the genus *Lipatia* (etc.?) is omitted from the Zoological Record.]

The neururation of *Lathontogenus* is inaccurately described and should be corrected as follows:—FW: 12 veins; 7–8 stalked, to costa, 6 out of their stalk; 9 very closely approximate to, or connate with, the stalk of 6–8; 3 and 4 very closely approximate, 3 from lower angle of cell; 2 widely remote from 3; 10 about midway between 9 and 11; 1 basally furcate. HW: 8 veins; 3–4 short-stalked, 3 straight, 4 somewhat arched; 5 nearer to 6 than to 4, straight, parallel with 6; 12 connected to radius by 11.

### 1. *Lathontogenus palpigera* Wlsm.

=*adustipennis* Wlsm. (n. syn.); =*ioloncha* Meyr.<sup>6</sup>; =*crotolariella* Busck<sup>6</sup>.

*Gelechia palpigera* Wlsm. Tr. Ent. Soc. Lond. 1891 94 Pf. 4·31 (1891)<sup>1</sup>. *Lathontogenus adustipennis* Wlsm. Pr. Z. Soc. Lond. 1897 88 sp. 79 (1897)<sup>2</sup>. *Paraspistes ioloncha* Meyr. Jr. Bomb. NH. Soc. 16 600 (1905)<sup>3</sup>: Tr. Linn. Soc. Lond. (2 s. Z.) 14 274 sp. 25 (1910)<sup>4</sup>. "*Lipatia crotolariella* Busck Bull. Dp. Agr. Trinidad 9 243 (1910)"<sup>5</sup>. *Paraspistis palpigera* Busck Pr. US. Nat. Mus. 47 10–11 (1914)<sup>6</sup>.

*Types* ♂ ♀: *palpigera* Wlsm., ♂ (9322), ♀ (9323) *Delagoa Bay*, Mus. Wlsm. BM.; *adustipennis* Wlsm., ♂ (6228), ♀ (6229) *Grenada*, Mus. Wlsm. BM.; *ioloncha* Meyr., ♂ ♀ (*Ceylon*) Mus. Meyr.; *crotolariella* Busck, ♂ (13382, *Trinidad*) US. Nat. Mus.

*Hab.* ASIA, S. CEYLON<sup>3–4, 6</sup>: Peradeniya, ⊕ in pods *Crotalaria* sp., excl. VII. (*E. E. Green*)<sup>2</sup>. AFRICA, E. SEYCHELLES<sup>3</sup>: Mahé, Cascade Estate, II–III<sup>3</sup>. MOZAMBIQUE<sup>1</sup>: *Delagoa Bay*<sup>1</sup>. AMERICA, C–I. Central America<sup>5</sup>—PANAMA<sup>5</sup>: *Alhajuela* and *Corozal*, IV. 1911 (*A. Busck*)<sup>6</sup>. West Indies<sup>2, 5–6</sup>—BAHAMAS<sup>6</sup>: *Nassau*, ⊕ in pods *Acacia*? sp. (= "woman's tongue")<sup>6</sup>—JAMAICA: ST. ANN: *Runaway Bay*, 24. II – 24. III. 1905 (*Wlsm.*)—ST. CROIX, IV–V. (*F. Gudmann, W. v. Hedemann*)<sup>2</sup>—ST. THOMAS, III. (*F. Gudmann, W. v. Hedemann*)<sup>2</sup>—GRENADA, IV, VIII. (*H. H. Smith*)<sup>2</sup>—TRINIDAD, ⊕ in pods *Crotalaria* (*Urich*)<sup>5–6</sup>.

## RECURVARIA Hw. (pp. 43–7).

### 8. *Recurvaria putella* Busck.

*Recurvaria putella* Busck Pr. US. Nat. Mus. 47 11–12 (1914)<sup>1</sup>.

*Type* ♂ (15824) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: *Paraiso* (*A. Busck*)<sup>1</sup>: PANAMA<sup>1</sup>: *La Chorrera*, IV–V. (*A. Busck*)<sup>1</sup>.

### 9. *Recurvaria flavidella* Busck.

*Recurvaria flavidella* Busck Pr. US. Nat. Mus. 47 12 (1914)<sup>1</sup>.

*Type* ♂ (15825) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: *Paraiso*, IV–V. (*A. Busck*)<sup>1</sup>.

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## EPITHECTIS Meyr. (pp. 47-8).

1. **Epithectis lasciva** Wlsm. (p. 47)<sup>1</sup>.

*Hab.* PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: Alhajuela, IV. 1911 (*A. Busck*).

## AROGALEA Wlsm. (pp. 48-50).

4. **Arogalea soronella** Busck.

*Arogalea soronella* Busck Pr. US. Nat. Mus. 47 17 (1914)<sup>1</sup>.

*Type* ♂ (15833) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: La Chorrera and Cabima, V. (*A. Busck*)<sup>1</sup>.

## PHTHORIMAEA Meyr. (pp. 51-2).

=\**GELECHIA* Hb. (\**LITA* Tr.) Stgr-Rbl. Cat. Lp. Pal. 2 146-9 sp. 2626-2730 (1901). \**LITA* Splr. Schm. Eur. 2 365-70 no. 26 sp. 1-103 tf. 365·126 Pf. 88·1-8 (1910); Auctt.

*Phthorimaea* Meyr. will replace \**Lita* (nec Tr.) Auctt.—the Type of *Lita* Tr. is *virgella* Thnb. (= *longicornis* Crt.) Dp. 1838.

## PSORICOPTERA Stn. (pp. 58-9).

2. **Psoricoptera hora** Busck.

*Psoricoptera hora* Busck Pr. US. Nat. Mus. 47 14-15 (1914)<sup>1</sup>.

*Type* ♂ (15828) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Alhajuela, IV. (*A. Busck*)<sup>1</sup>.

## PARASTEGA Meyr.

*Type*: *Psoricoptera niveisignella* Z. (Busck 1914).

PARASTEGA Meyr. Tr. Ent. Soc. Lond. 1911 693-4 (1912); Busck Pr. US. Nat. Mus. 47 14, 16-17 (1914).

1. **Parastega chionostigma** Wlsm.

*Telphusa chionostigma* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 57 sp. 4 Pf. 2·17 (1911)<sup>1</sup>. *Parastega chionostigma* Busck Pr. US. Nat. Mus. 47 16 (1914)<sup>2</sup>.

*Type* ♀ (5831 Wlsm. Det. 1908) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: CANAL ZONE<sup>1</sup>: Tabernilla, VI. 1907 (*A. Busck*)<sup>1</sup>.

## 2. *Parastega niveisignella* Z.

*Psoricoptera niveisignella* Z. Hor. Soc. Ent. Ross. 13 333-5 Pf. 4:106 (1877)<sup>1</sup>. *Telphusa niveisignella* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 58 sp. 5 (1911)<sup>2</sup>. *Parastega niveisignella* Meyr. Tr. Ent. Soc. Lond. 1911 693 (1912)<sup>3</sup>; Busck Pr. US. Nat. Mus. 47 16 (1914)<sup>4</sup>.

Type ♂ (*Chiriqui*) Mus. Stgr.

Hab. AMERICA, C-S. Central America<sup>1-3</sup>—PANAMA<sup>1-3</sup>. South America<sup>2-3</sup>—COLOMBIA<sup>2</sup>—DUTCH GUIANA<sup>3</sup>—PERU<sup>2</sup>.

## 3. *Parastega curvatella* Busck.

*Parastega curvatella* Busck Pr. US. Nat. Mus. 47 16 (1914)<sup>1</sup>.

Type ♂ (15731) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello, Trinidad River, and La Chorrera, III-V. (*A. Busck*)<sup>1</sup>.

## 4. *Parastega trichella* Busck.

*Parastega trichella* Busck Pr. US. Nat. Mus. 47 16-17 (1914)<sup>1</sup>.

Type ♂ (15832) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello and Trinidad River, IV-V. (*A. Busck*)<sup>1</sup>.

## TELPHUSA Chmb. (pp. 56-8).

## 7. *Telphusa obligata* Busck.

*Telphusa obligata* Busck Pr. US. Nat. Mus. 47 15 (1914)<sup>1</sup>.

Type ♂ (15829) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: PANAMA<sup>1</sup>: La Chorrera, V. (*A. Busck*)<sup>1</sup>.

## 8. *Telphusa medulella* Busck.

*Telphusa medulella* Busck Pr. US. Nat. Mus. 47 15-16 (1914)<sup>1</sup>.

Type ♂ (15830) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello, and Trinidad River, III-V. (*A. Busck*)<sup>1</sup>.

## AROGA Busck.

Type: *Gelechia paraplutella* Busck (Busck 1914).

AROGA Busck Pr. US. Nat. Mus. 47 13-14 (1914).

## 1. *Aroga paraplutella* Busck.

*Gelechia paraplutella* Busck Pr. Ent. Soc. Wash. 11 181 (1909)<sup>1</sup>. *Aroga paraplutella* Busck Pr. US. Nat. Mus. 47 14 (1914)<sup>2</sup>.

Type ♂ (12688) US. Nat. Mus.

*Hab.* AMERICA, N-C. United States <sup>1-2</sup>—CALIFORNIA <sup>1-2</sup>: LOS ANGELES <sup>1-2</sup>: Los Angeles, VI. (*H. G. Dyar, A. N. Caudell*) <sup>1-2</sup>: SAN DIEGO <sup>1-2</sup>: San Diego, V, VII. (*L. E. Ricksecker*) <sup>1-2</sup>. Central America <sup>2</sup>—PANAMA <sup>2</sup>: CANAL ZONE <sup>2</sup>: Paraiso, I. (*A. Busck*) <sup>2</sup>.

GELECHIA Hb. (pp. 59-70).

30. *Gelechia tehuacana* Busck.

*Gelechia tehuacana* Busck Ins. Insc. Mens. 1 140-1 (1913) <sup>1</sup>.

*Type* ♂ (16661) US. Nat. Mus.

*Hab.* MEXICO <sup>1</sup>: PUEBLA <sup>1</sup>: Tehuacan, VII. (*R. Müller*) <sup>1</sup>.

31. *Gelechia traducella* Busck.

*Gelechia traducella* Busck Pr. US. Nat. Mus. 47 12-13 (1914) <sup>1</sup>.

*Type* ♂ (15826) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: PANAMA <sup>1</sup>: La Chorrera, V. (*A. Busck*) <sup>1</sup>.

32. *Gelechia geniatella* Busck.

*Gelechia geniatella* Busck Pr. US. Nat. Mus. 47 13 (1914) <sup>1</sup>.

*Type* ♂ (15827) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Porto Bello, Trinidad River, Alhajuela, Paraiso, and Corozal, III-V. (*A. Busck*) <sup>1</sup>.

ATOPONEURA Busck.

*Type*: *Atoponeura violacea* Busck (Busck 1914).

ATOPONEURA Busck Pr. US. Nat. Mus. 47 4 (1914).

1. *Atoponeura violacea* Busck.

*Atoponeura violacea* Busck Pr. US. Nat. Mus. 47 4 (1914) <sup>1</sup>.

*Type* ♂ (15816) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Trinidad River, III. (*A. Busck*) <sup>1</sup>.

COMMATICA Meyr.

= APOPIRA Wlsm.

*Type* 1: *Commatica cremna* Meyr. (Meyr. 1909).

COMMATICA Meyr. Tr. Ent. Soc. Lond. 1909 18-19 (1909): 1914 238-42 (1914).

*Type* 2: *Gelechia falcata* Wkr. (Wlsm. 1911).

APOPIRA Wlsm. Biol. C-Am. Ins. Lp-Het. 4 73-4 sp. 1 tf. 73-17, Pf. 2-14 (1911). COMMATICA Meyr. Tr. Ent. Soc. Lond. 1914 238 (1914).

Meyrick sinks *Apopira* Wlsm. as paronymous with *Commatica* Meyr., but *Apopira*



differs from *Commatica* (as described) in the absence of ocelli; in HW: 3-4 being "approximate, 4 from lower angle of cell, 3 from before angle"—instead of 3-4 "connate"; and HW: 6-7 are "separate, but approximated"—instead of "remote at base, rather diverging." *Commatica* will require some modification if it is to include *Apopira* Wlsm., and also *Simoneura* Wlsm., which has FW: "6 to costa, distinctly above apex," and HW: 6-7 "connate."

### BESCIVA Busck.

Type: *Besciva longitudinella* Busck (Busck 1914).

BESCIVA Busck Pr. US. Nat. Mus. 47 5-6 (1914).

#### 1. *Besciva longitudinella* Busck.

*Besciva longitudinella* Busck Pr. US. Nat. Mus. 47 6 (1914) <sup>1</sup>.

Type ♂ (16670) US. Nat. Mus.

Hab. PANAMA <sup>1</sup>: La Chorrera and Trinidad River, III-IV. (*A. Busck*) <sup>1</sup>.

### UNTOMIA Busck (pp. 74-8).

#### 6. *Untomia juvenella* Wlsm.

n. syn. = *horista* Wlsm.

*Ypsolophus juvenellus* Wlsm. Pr. Z. Soc. Lond. 1897 86-7 sp. 77 (1897) <sup>1</sup>. *Untomia horista* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 76 sp. 6 (1911) <sup>2</sup>.

Types ♂ ♂: *juvenellus* Wlsm., ♂ (7202, Moneague) Mus. Wlsm. BM.; *horista* Wlsm., ♂ (65840, Teapa) BM.

Hab. AMERICA, C-I. Central America <sup>2</sup>—MEXICO <sup>2</sup>: TABASCO <sup>2</sup>: Teapa, III. (*H. H. Smith*) <sup>2</sup>. West Indies <sup>1</sup>—JAMAICA <sup>1</sup>: ST. ANDREW: Constant Spring, 18. XII-2. I. 1905 (*Wlsm.*): ST. ANN <sup>1</sup>: Moneague, 1100 ft., XI. 1891 (*P. Rendall*) <sup>1</sup>, 5. I-12. II. 1905 (*Wlsm.*).

### BATTARISTIS Meyr.

Type: *Battaristis ichnota* Meyr. (Meyr. 1914).

BATTARISTIS Meyr. Tr. Ent. Soc. Lond. 1914 245-50 (1914).

#### 1. *Battaristis symphora* Wlsm.

*Untomia symphora* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 76 sp. 5 Pf. 2 · 32 (1911) <sup>1</sup>. *Battaristis symphora* Meyr. Tr. Ent. Soc. Lond. 1914 246 (1914) <sup>2</sup>.

Type ♂ (65821) BM.

Hab. MEXICO <sup>1</sup>: TABASCO <sup>1</sup>: Teapa, III. (*H. H. Smith*) <sup>1</sup>.

#### 2. *Battaristis cenelpis* Wlsm.

*Untomia cenelpis* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 77 sp. 8 Pf. 2 · 34 (1911) <sup>1</sup>.

Type ♂ (65819) BM.

Hab. MEXICO <sup>1</sup>: TABASCO <sup>1</sup>: Teapa, III. (*H. H. Smith*) <sup>1</sup>.

3. **Battaristis concinnella** Chmb.

*Gelechia concinnusella* Chmb. Cin. Qr. Jr. Sc. 2 253-4 (1875)<sup>1</sup>. *Untomia concinnella* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 77 sp. 9 (1911)<sup>2</sup>. *Battaristis concinnella* Meyr. Tr. Ent. Soc. Lond. 1914 246 (1914)<sup>3</sup>.

*Hab.* AMERICA, N-C. United States<sup>1-3</sup>. Central America<sup>2</sup>—MEXICO<sup>2</sup>: GUERRERO<sup>2</sup>: Amula, 6000 ft., VIII-IX. (*H. H. Smith*)<sup>2</sup>.

4. **Battaristis pantalaena** Wlsm.

*Untomia ? pantalaena* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 78 sp. 10 Pf. 2 · 33 (1911)<sup>1</sup>.

*Type* ♂ (65820) BM.

*Hab.* MEXICO<sup>1</sup>: TABASCO<sup>1</sup>: Teapa, III. (*H. H. Smith*)<sup>1</sup>.

METOPLEURA Busck.

*Type*: *Metoppleura potosi* Busck (Busck 1912).

METOPLEURA Busck Pr. Ent. Soc. Wash. 14 : 1912 83-4 (1912).

1. **Metoppleura potosi** Busck.

*Metoppleura potosi* Busck Pr. Ent. Soc. Wash. 14 : 1912 84 (1912)<sup>1</sup>.

*Type* ♂ (14523) US. Nat. Mus. [*PTT.* (33910-13) Mus. Wlsm. BM.]

*Hab.* MEXICO<sup>1</sup>: SAN LUIS POTOSI<sup>1</sup>: Cerritos, VIII. 1911 (*R. Müller*)<sup>1</sup>.

STROBISIA Clms. (pp. 79-81).

1. **Strobisia iridipennella** Clms.

*Strobisia iridipennella* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 79-80 sp. 1 Pf. 2 · 35 (1911)<sup>1</sup>.

*Hab.* AMERICA, N-C-S. United States<sup>1</sup>. Central America<sup>1</sup>: MEXICO<sup>1</sup>. South America—COLOMBIA: MAGDALENA: Santa Marta (*Bouchard*, 1865) Stainton Coll. BM.

DICHOMERIS Hb. (pp. 87-104).

33. **Dichomeris servilis** Wlsm.

*Dichomeris servilis* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 103 sp. 33 Pf. 3 · 25 (1911)<sup>1</sup>; Busck Ins. Insc. Mens. 1 88 (1893)<sup>2</sup>.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—PANAMA<sup>1</sup>. South America<sup>2</sup>—BRITISH GUIANA<sup>2</sup>: ⊕ *Ipomoea fastigiata* (*H. W. B. Moore*)<sup>2</sup>.

36. **Dichomeris tristicta** Busck.

*Dichomeris tristicta* Busck Pr. US. Nat. Mus. 47 17-18 (1914)<sup>1</sup>.

*Type* ♂ (16672) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, V. (*A. Busck*)<sup>1</sup>.

**37. *Dichomeris costalis* Busck.***Dichomeris costalis* Busck Pr. US. Nat. Mus. 47 18 (1914)<sup>1</sup>.

Type ♂ (16673) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Tabogilla Island, and Porto Bello, II, IV. (*A. Busck*)<sup>1</sup>.**38. *Dichomeris varronia* Busck.***Dichomeris varronia* Busck Ins. Insc. Mens. 1 89 (1913)<sup>1</sup>: Pr. US. Nat. Mus. 47 18 (1914)<sup>2</sup>.

Type ♂ (16012) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—PANAMA<sup>1</sup>: Corozal, and La Chorrera (*A. Busck*)<sup>1</sup>. South America<sup>1</sup>—BRITISH GUIANA<sup>1</sup>: Kitty, ⊕ *Varronia curissavaca* (=“Black Sage”) (*W. H. B. Moore*)<sup>1</sup>.**39. *Dichomeris excavata* Busck.***Dichomeris excavata* Busck Pr. US. Nat. Mus. 47 18–19 (1914)<sup>1</sup>.

Type ♂ (16674) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.**40. *Dichomeris perceptella* Busck.***Dichomeris perceptella* Busck Pr. US. Nat. Mus. 47 19 (1914)<sup>1</sup>.

Type ♂ (16675) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>; La Chorrera, and Cabima, V–VI. (*A. Busck*)<sup>1</sup>.**41. *Dichomeris luminosa* Busck.***Dichomeris luminosa* Busck Pr. US. Nat. Mus. 47 19–20 (1914)<sup>1</sup>.

Type ♂ (16676) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.**42. *Dichomeris cornuta* Busck.***Dichomeris cornuta* Busck Pr. US. Nat. Mus. 47 20 (1914)<sup>1</sup>.

Type ♂ (16677) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Corozal, and Trinidad River, III, VI. (*A. Busck*)<sup>1</sup>.**43. *Dichomeris stellatella* Busck.***Dichomeris stellatella* Busck Pr. US. Nat. Mus. 47 20 (1914)<sup>1</sup>.

Type ♂ (16678) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Taboga Island, II. (*A. Busck*)<sup>1</sup>.**PROMENESTA Busck.**Type: *Promenesta lithochroma* Busck (Busck 1914).

PROMENESTA Busck Pr. US. Nat. Mus. 47 21–2 (1914).

1. **Promenesta lithochroma** Busck.

*Promenesta lithochroma* Busck Pr. US. Nat. Mus. 47 22 (1914) <sup>1</sup>.

Type ♂ (16680) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Alhajuela, Trinidad River, and Porto Bello, III. (*A. Busck*) <sup>1</sup>.

2. **Promenesta marginella** Busck.

*Promenesta marginella* Busck Pr. US. Nat. Mus. 47 22 (1914) <sup>1</sup>.

Type ♂ (16681) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Trinidad River, III. (*A. Busck*) <sup>1</sup>.

PAVOLECHIA Busck.

Type: *Pavolechia argentea* Busck (Busck 1914).

PAVOLECHIA Busck Pr. US. Nat. Mus. 47 20-1 (1914).

1. **Pavolechia argentea** Busck.

*Pavolechia argentea* Busck Pr. US. Nat. Mus. 47 21 (1914) <sup>1</sup>.

Type ♂ (16679) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Trinidad River, III. (*A. Busck*) <sup>1</sup>.

OESTOMORPHA Wlsm. (pp. 107-8).

1. **Oestomorpha alloeae** Wlsm.

*Oestomorpha alloeae* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 108 sp. 1 Pf. 3 · 29 (1911) <sup>1</sup>.

Type ♂ (5973 Wlsm. Det.) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America <sup>1</sup>—MEXICO <sup>1</sup>. South America—FRENCH GUIANA: Cayenne, II. 1904 (*W. Schaus*).

PTILOSTONYCHIA Wlsm. (pp. 109-10).

1. **Ptilostonychia plicata** Wlsm.

*Ptilostonychia plicata* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 109-10 Pf. 3 · 31 (1914) <sup>1</sup>.

*Hab.* PANAMA <sup>1</sup>: CANAL ZONE <sup>1</sup>: Cabima, V. 1911 (*A. Busck*).

DOLIDIRIA Busck.

Type: *Dolidiria arcanella* Busck (Busck 1912).

DOLIDIRIA Busck, Smithson. Misc. Coll. 59 (4) 5-6 (1912).

1. **Dolidiria arcanella** Busck.

*Dolidiria arcanella* Busck, Smithson. Misc. Coll. 59 (4) 5-6 (1912) <sup>1</sup>.

Type ♂ (14531) US. Nat. Mus. [*PTT.* (33917-8) Mus. Wlsm. BM.]

*Hab.* PANAMA <sup>1</sup>: CANAL ZONE <sup>1</sup>: Cabima, V. (*A. Busck*) <sup>1</sup>; Trinidad River, V. (*A. Busck*) <sup>1</sup>.

**Fam. 3. OECOPHORIDAE** (pp. 117-43).**LUPERCALIA** Busck.Type: *Lupercalia ignita* Busck (Busck 1912).*LUPERCALIA* Busck, *Smithson. Misc. Coll.* **59** (4) 6-7 (1912).**1. Lupercalia ignita** Busck.*Lupercalia ignita* Busck, *Smithson. Misc. Coll.* **59** (4) 7 (1912)<sup>1</sup>.

Type ♂ (14533) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, V. 1911 (*A. Busck*)<sup>1</sup>.**HAMADERA** Busck.Type: *Hamadera aurea* Busck (Busck 1914).*HAMADERA* Busck Pr. US. Nat. Mus. **47** 22-3 (1914).**1. Hamadera aurea** Busck.*Hamadera aurea* Busck Pr. US. Nat. Mus. **47** 23 (1914)<sup>1</sup>.

Type ♂ (16682) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.**COSTOMA** Busck.Type: *Costoma basirosella* Busck (Busck 1914).*COSTOMA* Busck Pr. US. Nat. Mus. **47** 23-4 (1914).**1. Costoma basirosella** Busck.*Costoma basirosella* Busck Pr. US. Nat. Mus. **47** 24 (1914)<sup>1</sup>.

Type ♂ (16683) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, VI. (*A. Busck*)<sup>1</sup>.**RHINDOMA** Busck.Type: *Rhindoma rosapicella* Busck (Busck 1914).*RHINDOMA* Busck Pr. US. Nat. Mus. **47** 24-5 (1914).**1. Rhindoma rosapicella** Busck.*Rhindoma rosapicella* Busck Pr. US. Nat. Mus. **47** 25 (1914).

Type ♂ (16684) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Alhajuela, and Trinidad River, IV-V. (*A. Busck*)<sup>1</sup>.

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3 hh



## PSILOCORISIS Clms. (pp. 118-9).

2. **Psilocorsis indalma** Wlsm. (pp. 118-9).

[“*ingens*” on p. 119, line 8, laps. cal. = *indalma*.]

4. **Psilocorsis crucifera** Busck.

*Psilocorsis crucifera* Busck Pr. US. Nat. Mus. 47 25-6 (1914)<sup>1</sup>.

Type ♂ (16686) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—COSTA RICA<sup>1</sup>: Sixola River (*W. Schaus*)<sup>1</sup>—PANAMA<sup>1</sup>: Trinidad River, and Cabima (*A. Busck*)<sup>1</sup>. South America<sup>1</sup>—FRENCH GUIANA<sup>1</sup>: St. Jean (*W. Schaus*)<sup>1</sup>.

## PELEOPODA Z. (p. 131).

2. **Peleopoda regiella** Busck.

*Peleopoda regiella* Busck, Smithson. Misc. Coll. 59 (4) 7-8 (1912)<sup>1</sup>.

Type ♂ (14534) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Cabima, V. 1911 (*A. Busck*)<sup>1</sup>.

3. **Peleopoda imperiella** Busck.

*Peleopoda imperiella* Busck Pr. US. Nat. Mus. 47 26 (1914)<sup>1</sup>.

Type ♂ (16687) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: La Chorrera, V. (*A. Busck*)<sup>1</sup>.

## ANCIPITA Busck.

Type: *Ancipita atterria* Busck (Busck 1914).

ANCIPITA Busck Pr. US. Nat. Mus. 47 26-7 (1914)<sup>1</sup>.

1. **Ancipita atterria** Busck.

*Ancipita atterria* Busck Pr. US. Nat. Mus. 47 26-7 (1914)<sup>1</sup>.

Type ♂ (16688) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Cabima, VI. (*A. Busck*)<sup>1</sup>.

## DOXA Wlsm. (pp. 119-20).

1. **Doxa virginia** Busck.

*Doxa virginia* Busck Pr. US. Nat. Mus. 47 27 (1914)<sup>1</sup>.

Type ♂ (16745) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III-IV, VI. (*A. Busck*)<sup>1</sup>.

## CRYPTOLECHIA Z. (pp. 121-5).

7. **Cryptolechia ancorata** Wlsm. (p. 124).

*Hab.* COSTA RICA<sup>1</sup>: San Francisco de Guadalupe, IX. 1896 (*H. Pittier de Fabrega*).  
Unique.

The actual locality of the Type was omitted on p. 124.

10. **Cryptolechia ignicolor** Busck.

*Cryptolechia ignicolor* Busck Pr. US. Nat. Mus. 47 27-8 (1914)<sup>1</sup>.

*Type* ♂ (16746) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Cabima, V. (*A. Busck*)<sup>1</sup>.

11. **Cryptolechia illuminella** Busck.

*Cryptolechia illuminella* Busck Pr. US. Nat. Mus. 47 28 (1914)<sup>1</sup>.

*Type* ♂ (16747) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

12. **Cryptolechia sulphurea** Busck.

*Cryptolechia sulphurea* Busck Pr. US. Nat. Mus. 47 28 (1914)<sup>1</sup>.

*Type* ♂ (16748) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, VI. (*A. Busck*)<sup>1</sup>.

13. **Cryptolechia tunicata** Busck.

*Cryptolechia tunicata* Busck Pr. US. Nat. Mus. 47 29 (1914)<sup>1</sup>.

*Type* ♂ (16749) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, VI. (*A. Busck*)<sup>1</sup>.

14. **Cryptolechia marcella** Busck.

*Cryptolechia marcella* Busck Pr. US. Nat. Mus. 47 29 (1914)<sup>1</sup>.

*Type* ♂ (16750) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—COSTA RICA<sup>1</sup>: Sixola River (*W. Schaus*)<sup>1</sup>  
—PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>. South America<sup>1</sup>—FRENCH GUIANA<sup>1</sup>:  
St. Jean (*W. Schaus*)<sup>1</sup>.

15. **Cryptolechia chorrera** Busck.

*Cryptolechia chorrera* Busck Pr. US. Nat. Mus. 47 29-30 (1914)<sup>1</sup>.

*Type* ♂ (16751) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: La Chorrera (*A. Busck*)<sup>1</sup>.

16. **Cryptolechia analis** Busck.*Cryptolechia analis* Busck Pr. US. Nat. Mus. 47 30 (1914) <sup>1</sup>.

Type ♂ (16752) US. Nat. Mus.

Hab. PANAMA <sup>1</sup>: Porto Bello, IV. (*A. Busck*) <sup>1</sup>.17. **Cryptolechia notella** Busck.*Cryptolechia notella* Busck Pr. US. Nat. Mus. 47 30 (1914) <sup>1</sup>.

Type ♂ (16753) US. Nat. Mus.

Hab. PANAMA <sup>1</sup>: Trinidad River, III. (*A. Busck*) <sup>1</sup>.

## TRYCHERODES Meyr.

=§ *TERATOMORPHA* Wlsm. (*ante* pp. 127-8).Type: *Teratomorpha albifrons* Wlsm. (Wlsm. 1912; Meyr. 1914).TRYCHERODES Meyr. =§ *TERATOMORPHA* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 127-8 sp. 1-2 Pf. 4·18-19 (1912); Busck Pr. US. Nat. Mus. 47 31 (1914). TRYCHERODES (nn.) Meyr. Exot. Micr. 1 252 (X. 1914).[§ *Teratomorpha* Wlsm. is homonymous with **TERATOMORPHA** Trnr. (1896) *Lep.*, and Nicév. (1896) *Lep.*]1. **Trycherodes albifrons** Wlsm.*Teratomorpha albifrons* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 127-8 Pf. 4·18 (1912).2. **Trycherodes producta** Wlsm.*Teratomorpha producta* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 128 Pf. 4·19 (1912).3. **Trycherodes chilibrella** Busck.*Teratomorpha chilibrella* Busck Pr. US. Nat. Mus. 47 31 (1914) <sup>1</sup>.

Type ♂ (16754) US. Nat. Mus.

Hab. PANAMA <sup>1</sup>: Alhajuela, IV. (*A. Busck*) <sup>1</sup>.

## PINARIS Hb. (pp. 375-6).

=AGONOPTERYX Hb. (*ante* pp. 135-6).Type 1: *Tinea laterella* S-D. (= *heraclella* Hb. 417 \* *heracleiella* Hb. Verz. 3968—Wlsm. 1914).

PINARIS Hb. Ztr. Smlg. Exot. Schm. 3 14-15, [44], [45]. [47], no. 221 Pf. 76·441-2 (1825): Verz. Schm. 411 sp. 3961-72 (1826); Wlsm. Biol. C-Am. Ins. 4 375-6 (1914).

[nec \* *PINARIS* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 135 Type 2 (1912)—*arenella* S-D. (*vide* Type 7, p. 421).]Type 2: *Pyralis ocellana* F. (Wlsm. 1908).AGONOPTERYX Hb. (*ante* p. 135, Type 1).

Type 7: *Tinea arenella* S-D. (= *gilvella* Hb.) Wlsm. 1908).

\* *PINARIS* (Hb.) Wlsm. = *DEPRESSARIA* Hw. (A. *PINARIS* Hb.) Stph. Ill. Br. Ent. Haust. 4 197-200 sp. 1-12 (1834) : 422 no. 1205 sp. 3962-72 (1835). *PINARIS* Wlsm. Pr. Z. Soc. Lond. 1907 955 (1908) : Biol. C-Am. Ins. Lp-Het. 4 135 Type 2 (1912).

In the Zuträge Exot. Schm. (3 14-15) Hübner uses *Pinaris* Hb. for *Pinaris hamiferella* Hb. Ztr. 441-2, and "*P. heracliella* Hübn. 417" [*i. e. laterella* S-D.]. The preface to the "Drittes Hundert" of the Zuträge is dated "Augsburg den 27 August 1825," and the Title is also dated 1825. Page 411 of Hübner's Verzeichniss, on which *Pinaris* Hb. (sp. 3961-72) is printed, forms part of sig. 26, which was published before January 1827, and is assumed to have been issued in 1826. Unless more definite dates can be obtained, we must take it that *Pinaris* Hb. Zuträge (1825) appeared before *Pinaris* Hb. Verzeichniss (1826), although the genus was evidently founded in the Verzeichniss, which does not include *hamiferella* Hb., and of which "*P. heracliella* Hubn. Tin. 417" was species no. 3968. Poey, in 1832, removed *hamiferella* Hb. to his new genus *Acrolophus*, and restricted *Pinaris* Hb. to the Verzeichniss species (*vide ante* pp. 375-6). In 1808, and in 1812 (*ante* pp. 135-6), *Tinea arenella* S-D. was cited as the Type of *Pinaris*; this is a possible type for the Verzeichniss (1826), but not for the Zuträge (1825), and further change will be avoided by adopting as the Type *Tinea laterella* S-D. (= *heracliella* Hb.) which occurs in both publications, and which was actually constituted the Type of the Zuträge by Poey in 1832.

### GONADA Busck.

Type: *Gonada falculinella* Busck (Busck 1911).

GONADA Busck Pr. US. Nat. Mus. 40 211 Pf. 8·5 (1911): Smithson. Misc. Coll. 59 (4) 6 (1912).

#### 1. *Gonada cabima* Busck.

*Gonada cabima* Busck, Smithson. Misc. Coll. 59 (4) 6 (1912)<sup>1</sup>.

Type ♂ (14532) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Cabima, V. 1911 (*A. Busck*)<sup>1</sup>.

### SCHIFFERMÜLLERIA Hb.

= § *CHRYSLIA* Mill.; = *EPICALLIMA* Dyar (§ *CALLIMA* Clms.); = *DISQUÉIA* Splr.

Type 1: *Phalaena Tinea schaefferella* L. (Stph. 1835; Wlsm. & Drnt. 1909; Splr. 1910).

SCHIFFERMÜLLERIA Hb. Verz. Schm. 421 no. 4104-6 (1826); Stph. Ill. Br. Ent. Haust. 4 423 no. 1235 sp. 4104 (1835); Wlsm. & Drnt. Ent. Mo. Mag. 45 156 (1909). *OECOPHORA* Ltr. (*DISQUÉIA* Splr.) Splr. Schm. Eur. 2 348 sp. 43 Pf. 89·49 (1910).

Type 2: *Pancalia grandis* Desv. (= *leucochrysell*a Mill.; Mill. 1854).

§ *CHRYSLA* Mill. Ann. Soc. Ent. Fr. **23** (3 s. 2: 1854) 61 Pf. 3·II·3 (1854).

[*nec* *CHRYSLA* Bruand (1845) *Lp.*]

Type 3: *Callima argenticinctella* Clms. (Clms. 1860; Dyar 1902).

EPICALLIMA Dyar. = § *CALLIMA* Clms. Pr. Ac. Nat-Sc. Phil. **12**: 1860 166-7 (1860): Clms-Stn. Tin. N-Am. pp. x, 122-3 (1872). EPICALLIMA Dyar Bull. US. Nat. Mus. **52** 525 sp. 5920 (1902); Meyr. Jr. Bomb. NH. Soc. **17** 408-9 (1906); Busck Pr. US. Nat. Mus. **35** 190, 201-2 no. 12 (1908): Ent. News **23** 170 (1912): Pr. Ent. Soc. Wash. **14**: 1912 44 (1912): Pr. US. Nat. Mus. **47** 33 (1914).

### 1. *Schiffermülleria taboga* Busck.

*Epicallima taboga* Busck Pr. US. Nat. Mus. **47** 33 (1914)<sup>1</sup>.

Type ♂ (16694) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: TABOGA ID., VI. (*A. Busck*)<sup>1</sup>.

## DECANTHA Busck.

Type: *Oecophora borkhausenii* Z. (Busck 1908).

DECANTHA Busck Pr. US. Nat. Mus. **35** 190, 202 no. 13 (1908): **47** 31 (1914).

### 1. *Decantha minuta* Busck.

*Decantha minuta* Busck Pr. US. Nat. Mus. **47** 31 (1914)<sup>1</sup>.

Type ♂ (16755) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

## TRICLONELLA Busck (pp. 136-7).

### 3. *Triclonella sequella* Busck.

*Triclonella sequella* Busck Pr. US. Nat. Mus. **47** 32 (1914)<sup>1</sup>.

Type ♂ (16692) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Paraiso, La Chorrera, Corozal, and Porto Bello, IV-V. (*A. Busck*)<sup>1</sup>.

## BORKHAUSENIA Hb. (p. 143).

### 2. *Borkhausenia clevelandi* Busck.

*Borkhausenia clevelandi* Busck Pr. US. Nat. Mus. **47** 32-3 (1914)<sup>1</sup>.

Type ♂ (16693) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: La Chorrera, V. (*A. Busck*)<sup>1</sup>; Porto Bello, X. (*G. F. Cleveland*)<sup>1</sup>.



**Fam. 4. ETHMIADAE** (pp. 143-8).

## ETHMIA Hb. (pp. 143-8).

Busck Pr. Ent. Soc. Wash. **14:1912** 84-5 (1912): Ins. Insc. Mens. **1** 141 (1913): **2** 53-7 (1914):  
Pr. US. Nat. Mus. **47** 33-5 (1914).

**13 (2·01). Ethmia striatella** Busck.

*Ethmia striatella* Busck Ins. Insc. Mens. **1** 141 (1913)<sup>1</sup>.

Type ♂ (16662) US. Nat. Mus.

Hab. MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, VI. (*R. Müller*)<sup>1</sup>.

**14 (2·1). Ethmia transversella** Busck.

*Ethmia transversella* Busck Ins. Insc. Mens. **2** 53-4 (1914)<sup>1</sup>.

Type ♂ (18270) US. Nat. Mus.

Hab. COSTA RICA<sup>1</sup>: Juan Viñas (*W. Schaus*)<sup>1</sup>.

**15 (3·1). Ethmia gigantea** Busck.

*Ethmia gigantea* Busck Ins. Insc. Mens. **2** 54 (1914)<sup>1</sup>.

Type ♂ (18265) US. Nat. Mus.

Hab. MEXICO<sup>1</sup>: MEXICO<sup>1</sup>: Zacualpan, VIII. (*R. Müller*)<sup>1</sup>.

**16 (3·2). Ethmia abdominella** Busck.

*Ethmia abdominella* Busck Pr. Ent. Soc. Wash. **14:1912** 85 (1912)<sup>1</sup>.

Type ♂ (14525) US. Nat. Mus.

Hab. MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan (*R. Müller*)<sup>1</sup>.

**17 (7·01). Ethmia mansita** Busck.

*Ethmia mansita* Busck Ins. Insc. Mens. **2** 55-6 (1914)<sup>1</sup>.

Type ♂ (18266) US. Nat. Mus.

Hab. MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, IX. (*R. Müller*)<sup>1</sup>.

**18 (7·1). Ethmia proximella** Busck.

*Ethmia proximella* Busck Pr. Ent. Soc. Wash. **14:1912** 84-5 (1912)<sup>1</sup>.

Type ♂ (14524) US. Nat. Mus. [*PTT.* (33921-2) Mus. Wlsm. **BM.**]

Hab. MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan (*R. Müller*)<sup>1</sup>.

**19 (8·01). Ethmia festiva** Busck.

*Ethmia festiva* Busck Pr. US. Nat. Mus. **47** 33-4 (1914)<sup>1</sup>.

Type ♂ (16695) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello, V. (*A. Busck*)<sup>1</sup>.

20 (10·1). **Ethmia unguatella** Busck.*Ethmia unguatella* Busck Pr. US. Nat. Mus. 47 34-5 (1914)<sup>1</sup>.

Type ♂ (16696) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Alhajuela and Cabima, V. (*A. Busck*)<sup>1</sup>.21 (10·2). **Ethmia elutella** Busck.<sup>1</sup>*Ethmia elutella* Busck Pr. US. Nat. Mus. 47 35 (1914)<sup>1</sup>.

Type ♂ (16697) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.**Fam. 6. STENOMIDAE** (pp. 153-90).

## CATARATA Wlsm. (pp. 154-5).

Busck Pr. US. Nat. Mus. 47 35-8 (1914).

1. **Catarata lepisma** Wlsm.= *stenota* Wlsm.<sup>3</sup>*Catarata lepisma* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 154-5 sp. 1 (1912)<sup>1</sup>. *Catarata stenota* Wlsm.Biol. C-Am. Ins. Lp-Het. 4 155 sp. 2 (1912)<sup>2</sup>. *Catarata lepisma* Busck Pr. US. Nat. Mus. 47 35 (1914)<sup>3</sup>.*Types* ♂ ♀: *lepisma* Wlsm. ♀ (5874, *Tabernilla*, Wlsm. Det.) US. Nat. Mus.; *stenota* Wlsm. ♂ (66085, *San Gerónimo*) BM.*Hab.* Central America<sup>1-3</sup>—GUATEMALA<sup>2</sup>—PANAMA<sup>1, 3</sup>.2. **Catarata lapilella** Busck.*Catarata lapilella* Busck Pr. US. Nat. Mus. 47 36 (1914)<sup>1</sup>.

Type ♂ (16703) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.3. **Catarata pumilis** Busck.*Catarata pumilis* Busck Pr. US. Nat. Mus. 47 36 (1914)<sup>1</sup>.

Type ♂ (16704) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.4. **Catarata obnubila** Busck.*Catarata obnubila* Busck Pr. US. Nat. Mus. 47 36-7 (1914)<sup>1</sup>.

Type ♂ (16705) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, and Porto Bello, III. (*A. Busck*)<sup>1</sup>.

# HETEROCERA.

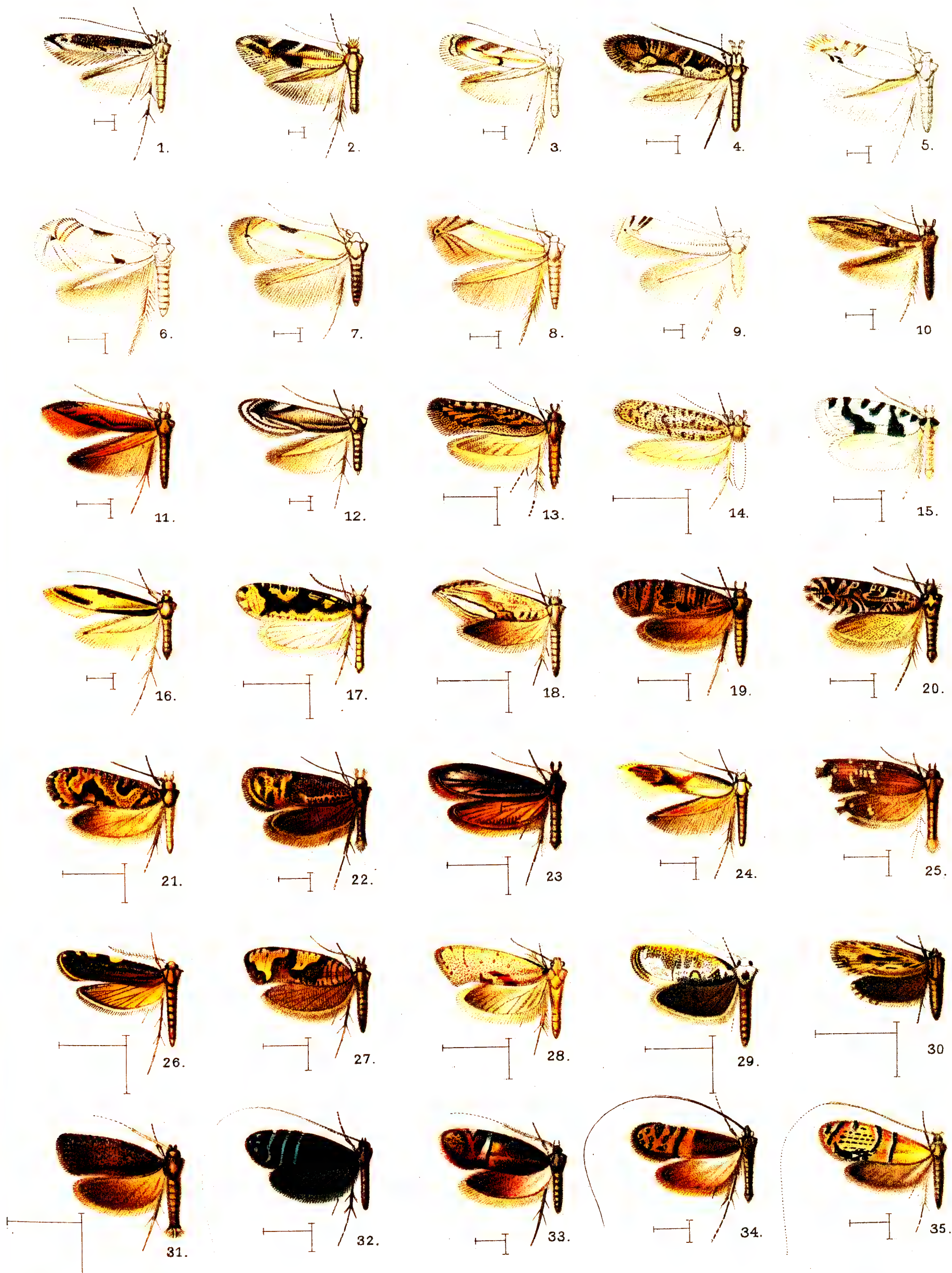
## TINEINA.

### PLATE X.

#### PHYLLORYCTERIDAE, TINEIDAE, ACROLOPHIDAE, NEMOPHORIDAE.

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3.	<i>Bucculatrix stictopus</i> Wlsm. .... (Type ♂ 66769) .... Teapa, Mexico .....	345
4.	<i>Comodica ordinata</i> Wlsm. - - - - (Type ♂ 66775)- - - - - Teapa, Mexico - - - - -	347
5.	<i>Leucoptera salicis</i> Wlsm. .... (Type ♂ 7268)..... Mexico City, Mexico .....	349
6.	<i>Opostega perdigna</i> Wlsm. - - - - (Type ♀ 66818)- - - - - Omilteme, Mexico- - - - -	349
7.	<i>Opostega elachista</i> Wlsm. .... (Type ♂ 66790) .... Amula, Mexico .....	350
8.	<i>Opostega congruens</i> Wlsm. - - - - (Type ♂ 66791)- - - - - Amula, Mexico - - - - -	350
9.	<i>Opostega pumila</i> Wlsm. .... (Type ♂ 66772) .... Teapa, Mexico .....	350
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F.W. Frohawk, del. A.J.J. Wendel, lith.

TINEINA  
PARORNIX - ADELA.

P.W.M. Trap, Chromo. Leiden.

5. **Catarata ocellata** Busck.*Catarata ocellata* Busck Pr. US. Nat. Mus. 47 37 (1914)<sup>1</sup>.

Type ♂ (16707) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: La Chorrera, V. (*A. Busck*)<sup>1</sup>.6. **Catarata curvilineella** Busck.*Catarata curvilineella* Busck Pr. US. Nat. Mus. 47 37-8 (1914)<sup>1</sup>.

Type ♂ (16706) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*).

## ATHLETA Wlsm. (pp. 155-7).

Busck Pr. US. Nat. Mus. 47 38 (1914).

1. **Athleta trisecta** Wlsm.*Athleta trisecta* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 155-6 Pf. 5·24 (1912)<sup>1</sup>; Busck Pr. US. Nat. Mus. 47 38 (1914)<sup>2</sup>.Hab. Central America<sup>1-2</sup>—MEXICO<sup>1</sup>—GUATEMALA<sup>1</sup>—PANAMA<sup>2</sup>: Porto Bello, and Trinidad River (*A. Busck*)<sup>2</sup>: Panama, III. 1860 (*R. H. Stretch*—Stn. Coll. 401226).4. **Athleta nigricans** Busck.*Athleta nigricans* Busck Pr. US. Nat. Mus. 47 38 (1914)<sup>1</sup>.

Type ♂ (16708) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Trinidad River, VI. (*A. Busck*)<sup>1</sup>.

## ZETESIMA Wlsm. (p. 157).

2. **Zetesima portentosa** Busck.*Zetesima portentosa* Busck Pr. US. Nat. Mus. 47 39 (1914)<sup>1</sup>.

Type ♂ (16709) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.

## STENOMA Z. (pp. 157-87).

18. **Stenoma griseana** F.*Stenoma griseana* Wlsm. Biol. C-Am. Ins. Lp-Het. 4 164 sp. 18 (1914)<sup>1</sup>; Busck Ins. Insc. Mens. 1 90 (1913)<sup>2</sup>.Hab. AMERICA, C-I-S<sup>1</sup>. South America<sup>1-2</sup>—FRENCH GUIANA<sup>2</sup>: ⊕ *Guarea trichiloides* (*H. W. B. Moore*)<sup>2</sup>.

BIOL. CENTR.-AMER., Heter., Vol. IV., June 1915.



**92. *Stenoma claripennis* Busck.**

*Stenoma claripennis* Busck Pr. US. Nat. Mus. 47 39 (1914)<sup>1</sup>.

Type ♂ (16710) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello, Alhajuela, and Taboga Id., III-IV, VI. (*A. Busck*)<sup>1</sup>.

**93. *Stenoma vivax* Busck.**

*Stenoma vivax* Busck Pr. US. Nat. Mus. 47 40 (1914)<sup>1</sup>.

Type ♂ (16711) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Cabima, V. (*A. Busck*)<sup>1</sup>.

**94. *Stenoma sagax* Busck.**

*Stenoma sagax* Busck Pr. US. Nat. Mus. 47 40 (1914)<sup>1</sup>.

Type ♂ (16712) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Porto Bello, V. (*A. Busck*)<sup>1</sup>.

**95. *Stenoma felix* Busck.**

*Stenoma felix* Busck Pr. US. Nat. Mus. 47 40-1 (1914)<sup>1</sup>.

Type ♂ (16713) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Cabima, V. (*A. Busck*)<sup>1</sup>.

**96. *Stenoma chlorina* Krft.**

*Stenoma chlorina* Krft. Ent. News 22 126 (1911)<sup>1</sup>; Busck Pr. US. Nat. Mus. 47 41 (1914)<sup>2</sup>.

Type ♂ (16714) US. Nat. Mus.

Hab. AMERICA, C-S. Central America<sup>2</sup>—PANAMA<sup>2</sup>: Porto Bello, V. (*A. Busck*)<sup>2</sup>.  
South America<sup>1-2</sup>—BRAZIL<sup>1-2</sup>: SÃO PAULO<sup>1-2</sup>: São Paulo (*R. von Ihering*)<sup>1-2</sup>.

**97. *Stenoma lampyridella* Busck.**

*Stenoma lampyridella* Busck Pr. US. Nat. Mus. 47 41-2 (1914)<sup>1</sup>.

Type ♂ (16715) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Cabima, V. (*A. Busck*)<sup>1</sup>.

**98. *Stenoma viridis* Busck.**

*Stenoma viridis* Busck Pr. US. Nat. Mus. 47 42 (1914)<sup>1</sup>.

Type ♂ (16716) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

**99. *Stenoma frondifer* Busck.**

*Stenoma frondifer* Busck Pr. US. Nat. Mus. 47 42-3 (1914)<sup>1</sup>.

Type ♂ (16717) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

100. **Stenoma vividella** Busck.*Stenoma vividella* Busck Pr. US. Nat. Mus. 47 43 (1914)<sup>1</sup>.

Type ♂ (16718) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: La Chorrera, and Porto Bello, IV-V. (*A. Busck*)<sup>1</sup>.101. **Stenoma fenestra** Busck.*Stenoma fenestra* Busck Pr. US. Nat. Mus. 47 44 (1914)<sup>1</sup>.

Type ♂ (16719) US. Nat. Mus.

*Hab.* Central America<sup>1</sup>—COSTA RICA<sup>1</sup>: Sixola River (*W. Schaus*)<sup>1</sup>—PANAMA<sup>1</sup>: Chiriquicito (*A. Busck*)<sup>1</sup>.102. **Stenoma apicalis** Busck.*Stenoma apicalis* Busck Pr. US. Nat. Mus. 40 215-6 Pf. 8 · 13 (1911)<sup>1</sup>: 47 44 (1914)<sup>2</sup>.

Type ♂ (13573) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America<sup>2</sup>—PANAMA<sup>2</sup>: Cabima, VI. (*A. Busck*)<sup>2</sup>. South America<sup>1</sup>: FRENCH GUIANA<sup>1</sup>: St. Jean, Rio Maroni (*W. Schaus*)<sup>1</sup>.103. **Stenoma phytoptera** Busck.*Stenoma phytoptera* Busck Pr. US. Nat. Mus. 47 44 (1914)<sup>1</sup>.Type ♂ (16720, *Trinidad River*) US. Nat. Mus.*Hab.* Central America<sup>1</sup>—COSTA RICA<sup>1</sup>: Sixola River (*W. Schaus*)<sup>1</sup>—PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.104. **Stenoma fumipennis** Busck.*Stenoma fumipennis* Busck Pr. US. Nat. Mus. 47 45 (1914)<sup>1</sup>.

Type ♂ (16725) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—COSTA RICA<sup>1</sup>: Sixola River (*W. Schaus*)<sup>1</sup>—PANAMA<sup>1</sup>: Alhajuela, and Trinidad River, III. (*A. Busck*)<sup>1</sup>. South America<sup>1</sup>—VENEZUELA<sup>1</sup>: Aroa (*W. Schaus*)<sup>1</sup>—FRENCH GUIANA<sup>1</sup>: St. Jean (*W. Schaus*)<sup>1</sup>.105. **Stenoma basilaris** Busck.*Stenoma basilaris* Busck Pr. US. Nat. Mus. 47 45-6 (1914)<sup>1</sup>.

Type ♂ (16721) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Alhajuela, Porto Bello, and Trinidad River, III-IV. (*A. Busck*)<sup>1</sup>.106. **Stenoma discalis** Busck.*Stenoma discalis* Busck Pr. US. Nat. Mus. 47 46 (1910)<sup>1</sup>.

Type ♂ (16722) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

**107. *Stenoma mitratella* Busck.**

*Stenoma mitratella* Busck Pr. US. Nat. Mus. **47** 46 (1914) <sup>1</sup>.

Type ♂ (16723) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Porto Bello, IV. (*A. Busck*) <sup>1</sup>.

**108. *Stenoma plumosa* Busck.**

*Stenoma plumosa* Busck Pr. US. Nat. Mus. **47** 47 (1914) <sup>1</sup>.

Type ♂ (16724) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Trinidad River, III. (*A. Busck*) <sup>1</sup>.

**109. *Stenoma striatella* Busck.**

*Stenoma striatella* Busck Pr. US. Nat. Mus. **47** 47 (1914) <sup>1</sup>.

Type ♂ (16726) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Trinidad River, and Alhajuela, III-IV. (*A. Busck*) <sup>1</sup>.

**110. *Stenoma pallulella* Busck.**

*Stenoma pallulella* Busck Pr. US. Nat. Mus. **47** 47-8 (1914) <sup>1</sup>.

Type ♂ (16727) US. Nat. Mus.

*Hab.* Central America <sup>1</sup>—COSTA RICA <sup>1</sup>: CARTAGO <sup>1</sup>: Turrialba (*W. Schaus*) <sup>1</sup>—  
PANAMA <sup>1</sup>: Trinidad River, III. (*A. Busck*) <sup>1</sup>.

**111. *Stenoma carbonifer* Busck.**

*Stenoma carbonifer* Busck Pr. US. Nat. Mus. **47** 48 (1914) <sup>1</sup>.

Type ♂ (16728) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America <sup>1</sup>—COSTA RICA <sup>1</sup>: CARTAGO <sup>1</sup>: Tuis  
(*W. Schaus*) <sup>1</sup>—PANAMA <sup>1</sup>: Porto Bello, and Corozal (*A. Busck*) <sup>1</sup>. South America <sup>1</sup>—  
FRENCH GUIANA <sup>1</sup>; St. Jean (*W. Schaus*) <sup>1</sup>.

**112. *Stenoma marginata* Busck.**

*Stenoma marginata* Busck Pr. US. Nat. Mus. **47** 49 (1914) <sup>1</sup>.

Type ♂ (16729) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Cabima, and Trinidad River, III, V. (*A. Busck*) <sup>1</sup>.

**113. *Stenoma simplex* Busck.**

*Stenoma simplex* Busck Pr. US. Nat. Mus. **47** 49 (1914) <sup>1</sup>.

Type ♂ (16738) US. Nat. Mus.

*Hab.* PANAMA <sup>1</sup>: Trinidad River, VI. (*A. Busck*) <sup>1</sup>.

**114. *Stenoma minor* Busck.**

*Stenoma minor* Busck Pr. US. Nat. Mus. 47 49-50 (1914)<sup>1</sup>.

Type ♂ (16730) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, and Porto Bello, III, V. (*A. Busck*)<sup>1</sup>.

**115. *Stenoma leucothea* Busck.**

*Stenoma leucothea* Busck Pr. US. Nat. Mus. 47 50 (1914)<sup>1</sup>.

Type ♂ (16735) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

**116. *Stenoma bovinella* Busck.**

*Stenoma bovinella* Busck Pr. US. Nat. Mus. 47 50-1 (1914)<sup>1</sup>.

Type ♂ (16736) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Paraiso, and Corozal, VI. (*A. Busck*)<sup>1</sup>.

**117. *Stenoma affirmatella* Busck.**

*Stenoma affirmatella* Busck Pr. US. Nat. Mus. 47 51 (1914)<sup>1</sup>.

Type ♂ (16737) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Paraiso, VI. (*A. Busck*)<sup>1</sup>.

**GONIOTERMA Wlsm. (pp. 187-90).****8. *Gonioterma impressella* Busck.**

*Gonioterma impressella* Busck Pr. US. Nat. Mus. 47 51-2 (1914)<sup>1</sup>.

Type ♂ (16739) US. Nat. Mus.

*Hab.* AMERICA, C-S. Central America<sup>1</sup>—PANAMA<sup>1</sup>: Cabima, and Trinidad River, V. (*A. Busck*)<sup>1</sup>. South America<sup>1</sup>—FRENCH GUIANA<sup>1</sup>: St. Jean, Rio Maroni (*W. Schaus*)<sup>1</sup>.

**9. *Gonioterma gerda* Busck.**

*Gonioterma gerda* Busck Pr. US. Nat. Mus. 47 52 (1914)<sup>1</sup>.

Type ♂ (16740) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, IV. (*A. Busck*)<sup>1</sup>.

**10. *Gonioterma minna* Busck.**

*Gonioterma minna* Busck Pr. US. Nat. Mus. 47 52-3 (1914)<sup>1</sup>.

Type ♂ (16741) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, and Alhajuela, III. (*A. Busck*)<sup>1</sup>.

11. **Gonioterma cora** Busck.*Gonioterma cora* Busck Pr. US. Nat. Mus. 47 53 (1914)<sup>1</sup>.

Type ♂ (16742) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, Alhajuela, and Porto Bello, IV-V. (*A. Busck*)<sup>1</sup>.**Fam. 10. SPARGANOTHIDAE** (pp. 206-24).

HOMONA Wkr. (pp. 207-8).

3. **Homona aquila** Busck.*Homona aquila* Busck Pr. US. Nat. Mus. 47 53-4 (1914)<sup>1</sup>.

Type ♂ (16743) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Cabima, V. (*A. Busck*)<sup>1</sup>.4. **Homona consobrina** Busck.*Homona consobrina* Busck Pr. US. Nat. Mus. 47 54-5 (1914)<sup>1</sup>.

Type ♀ (16744) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, V. (*A. Busck*)<sup>1</sup>.**Fam. 11. OLETHREUTIDAE** (pp. 224-67).

CYDIA Hb. (pp. 258, 260).

=§*LASPEYRESIA* Hb.§*Laspeyresia* Hb. (1826) is homonymous with **LASPEYRESIA** (=†*LASPEYRIA* Germar Syst. Gloss. Prodr. Bomb. 1 9, 13-14 (1811)—Type: *flexula* S-D.“Hujus generis monographiam exactissimam *Laspeyresio* debemus” . . . . . “et nomina a cel. Laspeyres adhibita, retinui. **LASPEYRIA.**” (Germ. l. c. 13.)**Fam. 12. TORTRICIDAE** (pp. 267-93).

TORTRIX L. (p. 275).

J. F. N. Gistel (or Gistl) in ‘Naturgeschichte des Thierreichs. Für höhere Schulen,’ on p. x (1848) proposed *Peribrosca* Gistel as a neonym in lieu of *Sciaphila* Tr. (1829), which he regarded as homonymous with *Sciaphilus* Schnh. (1826) Col. Both *Sciaphila* Tr. and *Peribrosca* Gistel sink as synonyms of **Cnephasia** Crt. (1826). *Peribrosca* is omitted from Fernald’s Gn. Tortr. (1908).



**Fam. 13. PHALONIADAE** (pp. 294-9).

PROPIRA Drnt. (pp. 297-8).

**Propira zacualpana** Busck.*Commophila zacualpana* Busck Ins. Insc. Mens. 1 141-2 (1913) <sup>1</sup>.

Type ♂ (16663) US. Nat. Mus.

Hab. MEXICO <sup>1</sup>: MEXICO <sup>1</sup>: Zacualpan, VII. (*R. Müller*) <sup>1</sup>.**Fam. 15. HEMEROPHILIDAE** (pp. 300-19).

GLYPHIPTERYX Hb. (pp. 300-1).

**6. Glyphipteryx plenella** Busck.*Glyphipteryx plenella* Busck Pr. US. Nat. Mus. 47 61-2 (1914) <sup>1</sup>.

Type ♂ ♀ (16765) US. Nat. Mus.

Hab. PANAMA <sup>1</sup>: Santa Rosa River, near Porto Bello, III. (*A. Busck*) <sup>1</sup>.

## MACHLOTICA Meyr.

Type: *Machlotica chrysodeta* Meyr. (Meyr. 1909).

MACHLOTICA Meyr. Tr. Ent. Soc. Lond. 1909 36-8 (1909).

**1. Machlotica atractias** Meyr.*Machlotica atractias* Meyr. Tr. Ent. Soc. Lond. 1909 38 (1909) <sup>1</sup>; Busck. Pr. US. Nat. Mus. 47 61 (1914) <sup>2</sup>.

Type ♀ Mus. Meyr.

Hab. AMERICA, C-S. Central America <sup>2</sup>—MEXICO <sup>2</sup>: VERA CRUZ <sup>2</sup>: Cordoba, II. (*F. Knab*) <sup>2</sup>—PANAMA <sup>2</sup>: Porto Bello, IV. (*A. Busck*) <sup>2</sup>. South America <sup>1-2</sup>—PERU <sup>2</sup>—BOLIVIA <sup>1-2</sup>: Songo <sup>1</sup>.

## USSARA Wkr.

Type: *Ussara decoratella* Wkr. (Wkr. 1864).

USSARA Wkr. Cat. Lp. BM. 29 800-1 no. 91 sp. 1 (1864): 30 1037 (1864).

**1. Ussara eurythmiella** Busck.*Ussara eurythmiella* Busck Pr. US. Nat. Mus. 47 59-60 (1914) <sup>1</sup>.

Type ♂ (16762) US. Nat. Mus.

Hab. PANAMA <sup>1</sup>: Porto Bello, IV. (*A. Busck*) <sup>1</sup>.

2. **Ussara eumitrella** Busck.

*Ussara eumitrella* Busck Pr. US. Nat. Mus. 47 60 (1914)<sup>1</sup>.

Type ♂ (16763) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.

PORPE Hb. (pp. 309-12).

10. **Porpe lamella** Busck.

*Porpe lamella* Busck Pr. US. Nat. Mus. 47 59 (1914)<sup>1</sup>.

Type ♂ (16761) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Porto Bello, III. (*A. Busck*)<sup>1</sup>.

TORTYRA Wkr. (pp. 312-13).

4. **Tortyra cuprinella** Busck.

*Tortyra cuprinella* Busck Pr. US. Nat. Mus. 47 57-8 (1914)<sup>1</sup>.

Type ♂ (16759) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Cabima, and Porto Bello, III, VI. (*A. Busck*)<sup>1</sup>.

5. **Tortyra ferratella** Busck.

*Tortyra ferratella* Busck Pr. US. Nat. Mus. 47 58 (1914)<sup>1</sup>.

Type ♂ (16760) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Paraiso, I. (*A. Busck*)<sup>1</sup>.

JONACA Wkr.

Type: *Jonaca compulsana* Wkr. (Wkr. 1863).

JONACA Wkr. Cat. Lp. BM. 28 457 no. 3 sp. 1 (1863): 35 1808 (1866); Busck Pr. US. Nat. Mus. 47 56-7 (1914).

1. **Jonaca olivacea** Busck.

*Jonaca olivacea* Busck Pr. US. Nat. Mus. 47 57 (1914)<sup>1</sup>.

Type ♂ (16758) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Cabima, Trinidad River, La Chorrera, and Taboga Id., I-VI. (*A. Busck*)<sup>1</sup>.

HEMEROPHILA Hb. (pp. 314-19).

6. **Hemerophila laciniosella** Busck.

*Hemerophila laciniosella* Busck Pr. US. Nat. Mus. 47 55 (1914)<sup>1</sup>.

Type ♂ (16756) US. Nat. Mus.

*Hab.* PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

7. *Hemerophila meratella* Busck.*Hemerophila meratella* Busck Pr. US. Nat. Mus. 47 55-6 (1914)<sup>1</sup>.

Type ♂ (16757) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Trinidad River, III. (*A. Busck*)<sup>1</sup>.

## ORDRUPIA Busck.

=†*ORDUPIA* Busck; =†*ARDRUPIA* Busck (†*ORDRUPIA* Busck).Type: *Ordrupia friserella* Busck (Busck 1911).*ORDRUPIA* Busck Pr. US. Nat. Mus. 40 228-9 Pf. 9-25 (1911): Smithson. Misc. Coll. 59 (4) 8 (1912).1. *Ordrupia fanniella* Busck.*Ordrupia fanniella* Busck, Smithson. Misc. Coll. 59 (4) 8 (1912)<sup>1</sup>.

Type ♂ (14535) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Cabima, V. 1911 (*A. Busck*)<sup>1</sup>.Fam. 19<sup>1</sup> (9). **ARRHENOPHANIDAE** (pp. 204-6).

ARRHENOPHANES Drnt. (pp. 204-6).

1. *Arrhenophanes perspicilla* Stoll (p. 205).*Arrhenophanes perspicilla* Busck Pr. US. Nat. Mus. 47 62 (1914)<sup>6</sup>.3. *Arrhenophanes chiquita* Busck.*Arrhenophanes chiquita* Busck Pr. US. Nat. Mus. 47 62-3 (1914)<sup>1</sup>.

Type ♂ (16766) US. Nat. Mus.

Hab. PANAMA<sup>1</sup>: Cabima (*A. Busck*)<sup>1</sup>.Fam. 20. **TINEIDAE** (pp. 344-75).

DORATA Busck.

=\**PTEROLONCHE* (*nec* Z.) Wlsm.; †*DOROTA* Krft.Type: *Pterolonche lineata* Wlsm. (= *virgatella* Busck; Busck 1904).*DORATA* Busck. =\**PTEROLONCHE* Wlsm. Bull. US. Dp. Agr. (Div. Ent.) Ins. Life 1 288-9 (1889); Dyar Bull. US. Nat. Mus. 52 491 sp. 5494 (1902). *DORATA* Busck Pr. Ent. Soc. Wash. 6 123-4 tf. 124-2 (1904). †*DOROTA* Krft. Can. Ent. 39 7-8 (1907). *DORATA* Busck Pr. US. Nat. Mus. 35 191 (1908).1. *Dorata sagittella* Busck.*Dorata sagittella* Busck Ins. Insc. Mens. 1 142 (1913)<sup>1</sup>.

Type ♀ (16664) US. Nat. Mus.

Hab. MEXICO<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, X. (*R. Müller*)<sup>1</sup>.

## PTEROPHORINA.

## 1. PTEROPHORIDAE.

## TRICHOPTILUS Wlsm.

Type: *Trichoptilus pygmaeus* Wlsm. (Wlsm. 1880).

TRICHOPTILUS Wlsm. Pter. Cal-Or. pp. xvi, 62-5 Pf. 3·15 (1880); Stgr-Rbl. Cat. Lp. Pal. 2 70-1 no. 207 sp. 1310-11 (1901); Frnld. Bull. US. Nat. Mus. 52 441 sp. 4929-31 (1902); Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 3, 4-5 no. 2 sp. 1-14 Pf. [1]·2 (1910); Lp. Cat. Junk 17 3-4 (1913).

1. *Trichoptilus defectalis* Wkr.

=*congrualis* Wkr.<sup>15</sup>; =*oxydactylus* Wkr.<sup>12</sup>; =*hawaiiensis* Btlr.<sup>11</sup>; =*ochrodactylus* Fish<sup>12</sup>; =*compsochondares* Meyr.<sup>12</sup>; =*centetes* Meyr.<sup>12</sup>; =*ralumensis* Pgstchr-Hfm.<sup>12</sup>.

*Pterophorus defectalis* Wkr. Cat. Lp. BM. 30 943 sp. 49 (1864)<sup>1</sup>. *Pterophorus congrualis* Wkr. Cat. Lp. BM. 30 943-4 sp. 51 (1864)<sup>2</sup>. *Pterophorus oxydactylus* Wkr. Cat. Lp. BM. 30 944 (1864)<sup>3</sup>. *Aciptilia hawaiiensis* Btlr. Ann-Mag. NH. (5 s.) 7 408 (V. 1881)<sup>4</sup>. *Trichoptilus ochrodactylus* Fish Can. Ent. 13 142-3 (VII. 1881)<sup>5</sup>. *Trichoptilus compsochondares* Meyr. Tr. Ent. Soc. Lond. 1886 16 (1886)<sup>6</sup>. *Trichoptilus centetes* Meyr. Tr. Ent. Soc. Lond. 1886 16-17 (1886)<sup>7</sup>; Wlsm. Pr. Z. Soc. Lond. 1897 56 sp. 1 (1897)<sup>8</sup>. *Trichoptilus ralumensis* Pgstchr-Hfm. Zool. 12 (29 Lp. Bism-Arch. 2) 239 sp. 459 (1900)<sup>9</sup>. *Trichoptilus ochrodactylus* Frnld. Bull. US. Nat. Mus. 52 441 sp. 4930 (1902)<sup>10</sup>. *Trichoptilus oxydactylus* Wlsm. Fn. Haw. 1 471-2, 744 sp. 3 Pf. 10·3 (1907)<sup>11</sup>. *Trichoptilus congrualis* Fltchr. Spolia Zeyl. 6 27, 28-30 Pf. A·8, C·D, F·2-3 (1909)<sup>12</sup>; Meyr. Gn. Ins. Wytsm. 100 5 sp. 12 (1910)<sup>13</sup>. *Trichoptilus defectalis* Meyr. Gn. Ins. Wytsm. 100 5 sp. 8 (1910)<sup>14</sup>; Fltchr. Tr. Linn. Soc. Lond. (2 s. Z.) 13 312 (1910)<sup>15</sup>. *Buckleria defectalis* Fltchr. Tr. Linn. Soc. Lond. (2 s. Z.) 13 398-9 (1910)<sup>16</sup>. *Trichoptilus congrualis* Meyr. Lp. Cat. Junk 17 4 (1913)<sup>17</sup>.

Types ♂ ♀: *defectalis* Wkr. (1842:31, Sierra Leone) BM.; *congrualis* Wkr. (1861:20, Coimbatore) BM.; *oxydactylus* Wkr. (1857:48, Ceylon) BM.; *hawaiiensis* Btlr. (1881:7, Maui) BM.; *ochrodactylus* Fish (Texas) Mus. Fernald; *compsochondares* Meyr. ♀ (Cape de Verde Is.) Mus. Meyr. [PTT. (2279-82) Mus. Wlsm. BM.]; *centetes* Meyr. ♂ (Port Moresby) Mus. Meyr. [PTT. (4401-2) Mus. Wlsm. BM.]; *ralumensis* Pgstchr-Hfm. (Ralum) Mus. Dahl.

Hab. AFRICA, W-E-S-I.<sup>1, 6, 12-17</sup>—CAPE VERDE IS.<sup>6, 17</sup>—SIERRA LEONE<sup>1</sup>—MAURITIUS<sup>15-17</sup>—SEYCHELLES<sup>15-17</sup>. ASIA, SW-E.<sup>2-3, 7-9, 11-13, 15-17</sup>—ARABIA<sup>11, 17</sup>—INDIA<sup>2, 11-13, 15-17</sup>—CEYLON<sup>3, 11-13, 15-17</sup>: ⊕ on seeds *Boerhavia repens*<sup>12, 15</sup>—CHINA<sup>2, 12, 15-16</sup>. MALAY-SIA<sup>7-9, 11-13, 15-17</sup>—NEW GUINEA<sup>7-8, 11-13, 15-17</sup>—NEW BRITAIN (=Neu Pommern)<sup>9, 17</sup>. AUSTRALIA, NE.<sup>8, 11-13, 15-17</sup>—QUEENSLAND<sup>8, 11, 15-17</sup>. HAWAIIA<sup>4, 11, 13, 16-17</sup>. AMERICA, N-C-I. United States<sup>5, 10-13, 15-17</sup>—FLORIDA<sup>12, 15, 17</sup>—TEXAS<sup>5, 10, 17</sup>—ARIZONA<sup>11</sup>. Central America<sup>11</sup>—MEXICO<sup>11</sup>: SONORA (*H. K. Morrison*, 1883)—PANAMA: TABOGA ID., 29. V-3. VI. 1882 (*J. J. Walker*). South America<sup>15-17</sup>—COLOMBIA: MAGDALENA: Minca, 2000 ft., Sierra Nevada de Santa Marta, VI. 1889 (*H. H. Smith*)—BRAZIL: BAHIA:

Bahia, 12. XII. 1905 (*Valhalla R.Y.S., G. Meade-Waldo*)—PERU<sup>15-17</sup>: LIMA: Callao, X-XII. 1883 (*J. J. Walker*)—CHILE: TACNA: Arica, 16-22. I. 1884 (*J. J. Walker*). West Indies<sup>8, 11-13, 15-17</sup>—BAHAMAS: NEW PROVIDENCE: Nassau, 12. VII. 1898 (*J. L. Bonhote*), 1902 (*Sir G. T. Carter*)—JAMAICA<sup>17</sup>: ST. ANDREW; Constant Spring, 18. XII. 1904 (*Wlsm.*): ST. ANN: Runaway Bay, 17-25. II, 24. IV. 1905 (*Wlsm.*)—ST. CROIX, IV-V<sup>8, 11</sup>—ST. THOMAS, III<sup>8, 11</sup>—ST. VINCENT<sup>8, 11</sup>.

## 2. *Trichoptilus dulcis*, sp. n.

*Antennae* white, dusted with pale brown. *Palpi* slender, porrect; white, dusted with pale brown. *Head* and *Thorax* white, dusted with pale brown. *Forewings* white, dusted with pale brown, leaving three white streaks in the costal cilia—one at their commencement, one at their middle, and one at the apex, corresponding with slender white bands across the apical lobe; the first of these bands is continued across the tornal lobe, in the hind margin of which is also a white streak in the cilia before the apex. *Exp. al.* 11 mm. *Hindwings* with the first two lobes much dusted with pale brown, the apex of the first white; a white streak in the dorsal cilia before the apex of the second; the third lobe less dusted—it is white at the apex and before a patch of pale brown scales, occupying both sides of the lobe at a little more than two-thirds from the base. *Abdomen* white, very sparsely dusted. *Legs* white, with small pale brown hair-tufts above the spurs, a brown spot on each spur beyond its middle and pale brown spots at each joint of the tarsi.

*Type* ♀ (65475); Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). Unique.

The species differs from *pygmaeus* Wlsm. in the tuft of scales on the posterior lobe of the hindwings extending to both sides of the lobe and being nearer to the apex.

## OXYPTILUS Z.

*Type*: *Pterophorus* (*Oxyptilus*) *pilosellae* Z. (Tutt 1905).

*PTEROPHORUS* Gffr. (*OXYPTILUS* Z.) Z. Isis 35: 1841 765-6, 770, 788-94, 827-33 sp. 8-12 Pf. 4-5, 20-7 (1841). *OXYPTILUS* Stgr-Rbl. Cat. Lp. Pal. 2 71-2 no. 208 sp. 1312-24 (1901); Frnld. Bull. US. Nat. Mus. 52 441-2 sp. 4932-5 (1902); Tutt Ent. Rec. 17 35, 37 (1905); Br. Lp. 5 95, 411, 413-49 (1906); Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 3, 6-7 no. 5 sp. 1-30 Pf. [1] 6 (1910); Lp. Cat. Junk 17 5-8 (1913).

## 1. *Oxyptilus neales*, sp. n.

*Antennae* whitish, barred above with dark brownish fuscous, the dark bars near the apex being twice as wide as those near the base. *Palpi* slender, projecting scarcely the length of the head beyond it; whitish, banded with ferruginous around the middle of the median joint, the terminal joint narrowly banded toward the base, widely toward the apex. *Head* and *Thorax* light ferruginous. *Forewings* light ferruginous, somewhat clouded with a darker shade of the same across the base to one-fourth, and in a band before the fissure; the apical lobe is deeply shaded with dark coppery brown across its middle, leaving the costa somewhat paler, but with a small dark spot at the point whence the apex becomes depressed, immediately after this is a scarcely noticeable pale transverse line; a sinuous basal shade runs through the pale ferruginous terminal cilia to the acute apex, the cilia on the lower margin of the lobe being deeply shaded along its middle with dark coppery brownish; a whitish streak crosses the tornal lobe obliquely outward from the base of the fissure, beyond which the lobe is deep coppery brown, becoming almost fuscous along the sinuate shade-line at the base of the pale



ferruginous terminal cilia; on the upper edge of the lobe are alternating dark and pale lines in the cilia, those on the lower edge being dark coppery brown, almost fuscous, before the tornus, but pale ferruginous throughout the remainder of the dorsum with one or two dark spatulate scales at about one-third from the base. *Exp. al.* 11 mm. *Hindwings* and cilia dark cupreous; the posterior lobe very slender and short, speckled with whitish, a spatule of dark coppery brown scales spreading on either side of the end of the lobe, the cilia beyond and before it very pale ferruginous, with a smaller group of dark scales on the dorsum before the middle. *Abdomen* brownish ferruginous, a paler band across its base. *Legs* whitish, with spreading tufts of brownish ferruginous scales at the base of the pale spurs, bands and shades of the same colour being scattered along them.

*Type* ♀ (67135, *Teapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ; Atoyac, IV. (*H. H. Smith*); TABASCO: Teapa, III. (*H. H. Smith*). Two specimens.

There is a good deal of white on the underside of the thorax and abdomen.

### SOCHCHORA Wkr.

*Type*: *Sochchora donatella* Wkr. (Wkr. 1864).

SOCHCHORA Wkr. Cat. Lp. BM. 30 952 no. 8 sp. 1 (1864); Wlsm. Ent. Mo. Mag. 27 243-4 (1891): Nov. Lp. 1 81-2 Pf. 12·5 (1892).

#### 1. *Sochchora nubila*, F. & R.

*Oxyptilus nubilus* F. & R. Reise Nov. Zool-Lp. 2 Pf. 140·53 (1875)<sup>1</sup>. *Platyptilia nubila* Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 10 sp. 18 (1910)<sup>2</sup>: Lp. Cat. Junk 17 11 (1913)<sup>3</sup>.

*Type* ♀ (1913:86) Roths. Coll. (*Fldr. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: TABASCO: Teapa, III. (*H. H. Smith*). South America<sup>1-3</sup>—COLOMBIA<sup>1,3</sup>: CUNDINAMARCA<sup>1</sup>: Bogota (*Lindig*)<sup>1</sup>.

#### 2. *Sochchora dotina*, sp. n.

*Antennae* black, with small white bars above, except on the terminal half. *Palpi* erect, ferruginous; the slender terminal joint shorter than the median, clouded with dark brownish fuscous. *Head* and *Thorax* dark brownish ferruginous, the latter with a posterior patch of shining pale ferruginous. *Forewings* dark ferruginous, sparsely speckled with white scales and clouded along the margins and on the outer third with black, which forms a strong triangular spot beyond the middle preceding a faintly indicated pale ferruginous fascia, beyond which the apical and tornal lobes, both narrowly margined with black, are much suffused with blackish on a darker ferruginous ground than that of the remainder of the wing; terminal cilia rather pale ferruginous, with smoky interruptions. *Exp. al.* 14 mm. *Hindwings* light ferruginous, suffused with smoky blackish outward, the posterior lobe with a blackish scale-patch on its dorsum before the middle. *Abdomen* bright ferruginous, a narrow whitish transverse bar near the base; anal segment smoky. *Legs* bright ferruginous, clouded, especially on the spurs and tarsi, with smoky blackish.

*Type* ♀ (65473) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* PANAMA: CHIRIQUI: Bugaba, 800-1500 ft., 1881 (*G. C. Champion*). Unique.

This appears to agree with the variety of *Sochchora donatella* Wkr., but is certainly distinct from his *Type*, which does not possess the brilliant ferruginous colouring of the legs and body.

## PLATYPTILIA Hb.

Type: *Alucita gonodactyla* S-D. (Tutt 1905).

PLATYPTILIA Hb. Verz. Schm. 429 sp. 4178-81 (1826). *PTEROPHORUS* Gffr. (*PLATYPTILUS* Z.) Z. Isis **35**: 1841 764-5, 770, 772-88, 886 sp. 1-7 Pf. 4·3-4, ·16-19 (1841). PLATYPTILIA F. & R. Reise Nov. Zool-Lp. 2 Pf. 140·55, ·57-8 (1875); Z. Hor. Soc. Ent. Ross. **13** 460-9 sp. 1-5 Pf. 6·160-2 (1877); Wlsm. Pr. Z. Soc. Lond. **1897** 57-8 no. 3 sp. 3-4 (1897); Tutt Ent. Rec. **17** 35, 37 (1905); Br. Lp. **5** 78-83, 86-90, 92-5, 105, 182-219 (1906); Stgr-Rbl. Cat. Lp. Pal. **2** 72-3 no. 209 sp. 1325-42 (1901); Frnld. Bull. US. Nat. Mus. **52** 442-4 sp. 4936-56 (1902); Meyr. Gn. Ins. Wytsm. **100** (Lp-Het. Pter.) 4, 9-12 no. 11 sp. 1-86 Pf. [1]·10 (1910); Lp. Cat. Junk **17** 10-16 (1913).

1. *Platyptilia brevipennis* Z.

*Platyptilia brevipennis* Z. Verh. ZB. Ges. Wien **24**: 1874 442-3 Pf. 12·12 (1874)<sup>1</sup>; Meyr. Gn. Ins. Wytsm. **100** (Lp-Het. Pter.) 10 sp. 13 (1910)<sup>2</sup>; Lp. Cat. Junk **17** 11 (1913)<sup>3</sup>.

Type ♂ (102251); ♀ (102252) *Payta*, Mus. Wlsm. (*Zell. Coll.*) BM.

*Hab.* AMERICA, N-C-I. United States—FLORIDA: 1883 (*H. K. Morrison*). Central America—MEXICO: VERA CRUZ: Atoyac, IV. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*). South America<sup>1-3</sup>—COLOMBIA (*Baron von Nolcken*)—PERU<sup>1,3</sup>: PIURA<sup>1</sup>: *Payta*, IV. 1873 (*G. F. Mathew*)<sup>1</sup>—BRAZIL: CEARA, Ceara, VIII. 1884 (*J. H. Leech*). POLYNESIA—FIJI (*G. F. Mathew*). MALAYSIA—JAVA: Ludeking, Ambarawa (*Zell. Coll.*). AFRICA, W.—GAMBIA: Bathurst, VIII, XI. 1885 (*Sir G. T. Carter*).

2. *Platyptilia fuscicornis* Z.

*Platyptilia fuscicornis* Z. Hor. Soc. Ent. Ross. **13** 460-2 sp. 1 (1877)<sup>1</sup>; Wlms. Fn. Haw. **1** 472-4, 744 sp. 4 Pf. 10·4 (1907)<sup>2</sup>; Meyr. Gn. Ins. **100** (Lp-Het. Pter.) 10 sp. 24 (1910)<sup>3</sup>; Lp. Cat. Junk **17** 11 (1913)<sup>4</sup>.

Type ♂ (102250, *Bogota*) Mus. Wlsm. (*Zell. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*)—GUATEMALA: ALTA VERA PAZ: Balheu, 3850 ft., 3-5. II. 1880 (*G. C. Champion*). South America<sup>1-4</sup>—COLOMBIA<sup>1-2,4</sup>: CUNDINAMARCA<sup>1-2</sup>: Bogota, 23. II. 1871 (*Baron von Nolcken*)<sup>1-2</sup>. HAWAIIA<sup>2-4</sup>—KAUAI<sup>2</sup>—OAHU<sup>2</sup>—MOLOKAI<sup>2</sup>—MAUI<sup>2</sup>.

3. *Platyptilia lantana* Busck.

*Platyptilia lantana* Busck Ins. Insc. Mens. **2** 103-4 (1914)<sup>1</sup>.

Type ♂ (18429, *Honolulu*) US. Nat. Mus.

*Hab.* AMERICA, C. Central America (*A. Koebele*)<sup>1</sup>. HAWAIIA<sup>1</sup>—OAHU<sup>1</sup>: Honolulu, ⊕ *Lantana* (*O. H. Swezey*)<sup>1</sup>.

#### 4. *Platyptilia cardui* Riley.

†*carduidactylus* Riley; ‡*cardui* Z., Riley.

*Pterophorus carduidactylus* Riley Ann. Rp. Ins. Mo. 1 180-1 tf. 98, Pf. 2·13-14 (1869)<sup>1</sup>. *Platyptilus carduidactylus* Z. Stett. Ent. Ztg. 32 179 (1871)<sup>2</sup>. *Platyptilia cardui* Z. Verh. ZB. Ges. Wien 23:1873 Abh. 318-9 sp. 2 (1873)<sup>3</sup>. *Platyptilus cardui* Wlsm. Pter. Cal-Or. pp. xv, 7-8, 9-10, 35, 49 Pf. 1·6 (1880)<sup>4</sup>. *Platyptilia cardui* Riley US. Dp. Intr. Bull. 6 (Ind. Rp. Ins. Mo.) 83-4 (1881)<sup>5</sup>. *Platyptilus cardui* Klct. Bull. Buff. Soc. Nat. Sc. 4 47 (1882)<sup>6</sup>; H. Edw. Bull. US. Nat. Mus. 35 136 (1889)<sup>7</sup>. *Platyptilia carduidactyla* Frnld. Ann. Rp. Mass. Agr. Coll. 35 105, 108-9 (=Spcl. Bull. Hatch. Exp-Stn. pp. 23, 26-7) Pf. 2·1-2, 7·8-11 (1898)<sup>8</sup>. *Platyptilia cardui* Wlsm. Ent. Mo. Mag. 34 192-3 (1898)<sup>9</sup>. *Platyptilia carduidactyla* Frnld. Bull. US. Nat. Mus. 52 443 sp. 4941 (1902)<sup>10</sup>; Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 11 sp. 45 (1910)<sup>11</sup>; Lp. Cat. Junk 17 13 (1913)<sup>12</sup>.

*Hub.* AMERICA, N-C. **Canada**—VANCOUVER I.: Esquimalt, 1882 (*J. J. Walker*). **United States**<sup>1-12</sup>—NEW YORK<sup>6,8</sup>: Buffalo, ⊕ *Cirsium lanceolatum*<sup>6</sup>, spp.<sup>6</sup>, VI-VIII<sup>6</sup>—PENNSYLVANIA<sup>8</sup>—DISTRICT OF COLUMBIA<sup>8</sup>: Washington<sup>8</sup>—WISCONSIN: 1883 (*H. K. Morrison*)—ILLINOIS<sup>8</sup>—MISSOURI<sup>1-3,5,8</sup>: ⊕ *Cirsium lanceolatum*<sup>1-3,5-8</sup>, V, ex. VI.<sup>1-3</sup>—COLORADO: LARIMER: Loveland, VII-VIII. 1891 (*W. G. Smith*): CUSTER: Willow Creek, VII. 1880 (*T. D. A. Cockerell*)—TEXAS (*J. Boll*)<sup>3-4,8</sup>—ARIZONA: 1883 (*H. K. Morrison*)—CALIFORNIA<sup>4,8</sup>: DEL NORTE: Siskiyou Mts., 18. VI. 1872 (*Wlsm.*). **Central America**—GUATEMALA (“*Cand.*”—*Zell. Coll.*)—COSTA RICA: CARTAGO: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*).

Riley [Ind. Rp. Ins. Mo. 84 (1881)] adopted “*cardui*” in lieu of “*carduidactylus*,” remarking that Zeller “very properly, because of the incongruous compound, drops the conventional ending *dactylus* which I used in the original description.”

#### 2. *Platyptilia brevirostris*, sp. n.

*Antennae* whitish ochreous, dusted with dark ferruginous toward the base. *Palpi* slender, porrect, reaching very slightly beyond the head, the median joint slightly thickened; whitish ochreous, shaded with dark ferruginous at the sides. *Head* and *Thorax* whitish ochreous, much shaded with brownish ferruginous. *Forewings* with the lobes set somewhat widely apart, the fissure much rounded at the base; the apical lobe slightly uncate, its lower angle not strongly produced, the tornal lobe wider, also uncate, the tornus well-pronounced but rounded; whitish ochreous, smeared with brownish ferruginous and thickly sprinkled with dark brownish ferruginous scales, the costal third tending to be paler; no dark spot precedes the fissure, but a dark brown costal shade lies above and scarcely beyond its base, closely succeeded by a smaller costal spot of the same colour; the outer half of each lobe is deeply shaded with dark umber-brown, a single pale transverse line crossing the apical lobe before its lower angle, and two slender pale transverse lines cutting the dark shade on the tornal lobe, but not reaching the margins; the first, about the middle of the lobe, is very faint, the second, at a little distance from the termen, being more visible; cilia very pale whitish ochreous, a curved dark line from the apex to its lower angle increases the uncate appearance of the apical lobe, its dorsal cilia much spotted and shaded with dark umber-brown, almost fuscous; the upper margin of the tornal lobe is strongly shaded with the same colour, except at its extremities, a similar dark curved basal shade running through its terminal and tornal cilia, the dorsal cilia of the wing being dotted with dark spatulate scales. *Exp. al.* 20-25 mm. *Hindwings* dark brown, with scarcely paler brown cilia; the cilia on the hind lobe thickly studded with dark spatulate scales throughout its length—these scales somewhat longer along the middle than toward

the extremities of the lobe; the cilia of the anterior and median lobes are paler along their base and at their outer extremities than along their middle. *Abdomen* dark brownish, with a somewhat obscure pale diamond-shaped pattern above on its basal half. *Legs* whitish ochreous, with strong dark brown tufts on the joints of the tibiae at the base of each pair of long slender spurs.

*Type* ♀ (65428, *Chiriqui*); ♂ (65427, *Tepetlapa*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* Central America—MEXICO: GUERRERO: Tepetlapa, 3000 ft. (*H. H. Smith*)—GUATEMALA: ALTA VERA PAZ: Balheu, 3850 ft., 3–5.II. 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). Three specimens.

## ALUCITA L.

*Type*: *Phalaena Alucita pentadactyla* L. (Poda 1761; Wlsm. & Drnt. 1897).

PHALAENA ALUCITAE (ALUCITA) L. Syst. Nat. (ed. 10) 1 496, 542 no. 205·7 sp. 300–5 (1758); Poda Ins. Mus. Graec. 94 Pf. 2·14 (1761). ALUCITA Thnbg. (*resp.* Törner) Peric. Ent. 12 (1789): Diss. Ac. Upsal. 3 259 (1801); Wlsm. & Drnt. Ent. Mo. Mag. 33 41–2 (1897); Stgr-Rbl. Cat. Lp. Pal. 2 73–4 no. 210 sp. 1343–71 (1901); Frnld. Bull. US. Nat. Mus. 52 444 sp. 4957–60 (1902); Tutt Ent. Rec. 17 34, 37 (1905); Br. Lp. 5 70–6, 92–5, 115, 118, 409, 412 (1906); Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 3, 12–14 no. 12 sp. 1–51 Pf. [1]·11 (1910); Lp. Cat. Junk 17 16–20 (1913).

1. *Alucita trichogramma*, sp. n.

*Antennae* (missing). *Palpi* scarcely reaching the length of the head beyond it, short, straight, and devoid of clothing; white, with some brownish scales. *Head* white, but sprinkled with brownish scales above. *Thorax* longitudinally streaked brown and white. *Forewings* dark brown, but appearing greyish brown through scattered sprinkling of white scales, with slender white lines following the principal veins; of these one immediately below the costa, from the base to the commencement of the fissure, is reduplicated by a second line below it from the base to a white costal patch beyond the middle of the apical lobe; this patch extends from the costa to two-thirds of the width of the lobe, and is produced at its lower edge in a white line to the apex, separated by the dark ground-colour very narrowly from a slender white line along the posterior margin of the lobe; cilia brownish, interrupted by white scaling, broadly opposite to the costal patch, and again narrowly beyond it; the tornal lobe has a slender white line along each margin, the lower one produced to the base of the wing; cilia brownish, twice interrupted by white streaks. *Exp. al.* 16 mm. *Hindwings* somewhat bronzy brownish, especially in the cilia; a few whitish scales on the dorsal margin of the posterior lobe, about the middle and at its apex. *Abdomen* brownish, with white longitudinal streaks. *Legs* brown, with white lateral streaks.

*Type* ♀ (68580) Mus. Wlsm. BM.

*Hab.* COSTA RICA: CARTAGO: Juan Viñas, 2500–3500 ft., V. 1906 (*W. Schaus*). Unique.

## PTEROPHORUS Gffr.

*Type*: *Phalaena Alucita monodactyla* L. (= *didactylus* Ltr., Ltr. 1802; Wlgrn. 1859).

PTEROPHORUS Gffr. Hist. Ins. Paris 2 24–5, 90–3 sp. 1–3 Pf. 11·6 (1762); F. Sp. Ins. 2 310–12 no. 152 sp. 1–7 (1781); Gffr-Fourcr. Ent. Paris 2 256–7 no. 72 sp. 1–3 (1785); Ltr. HN. Crust-Ins. 3 418 (1802): 14 257–8 no. 457 sp. 1–5 Pf. 108·6 (1804–5); Wlgrn. Kngl.

Svensk. Vet-Ak. **3** (7) 5-6, 10, 20-1 no. 7 sp. 1 (1859); Wlsm. & Drnt. Ent. Mo. Mag. **33** 42 (1897); Wlsm. Pr. Z. Soc. Lond. **1897** 58-61 no. 6 sp. 7-17 (1897); Stgr-Rbl. Cat. Lp. Pal. **2** 75-6 no. 214 sp. 1383-97 (1901); Frnld. Bull. US. Nat. Mus. **52** 444-7 sp. 4961-90 (1902); Meyr. Gn. Ins. Wytsm. **100** (Lp-Het. Pter.) 3, 15-17 no. 15 sp. 1-81 Pf. [1] · 14 (1910); Lp. Cat. Junk **17** 21-6 (1913).

### 1. *Pterophorus epileucus*, sp. n.

*Antennae* minutely biciliate; white. *Palpi* short, slender, reaching scarcely to half the width of the eyes; white. *Head* somewhat rough, with upstanding scales above; white. *Thorax* white. *Forewings* widening outwardly from the base, the lobes divergent, the tornal lobe scarcely narrower than the apical, but somewhat more acuminate, the fissure rounded at the base; white, dusted with brownish scales, more thickly near the base of the dorsum, on the outer half of the cell, before a small crescent-shaped brownish spot which precedes the fissure, and along the middle of the lobes; cilia white, with one or two very faint brownish shade-streaks. *Exp. al.* 14-15 mm. *Hindwings* whitish, with a very faint tawny gloss; cilia white. *Abdomen* and *Legs* white.

*Type* ♂ (65450); ♀ (65451) *Teapa*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab. Central America*—MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*): TABASCO: Teapa, III. (*H. H. Smith*): GUERRERO: Tierra Colorada, X. (*H. H. Smith*)—GUATEMALA: ALTA VERA PAZ: Cahabon, 800 ft., III. 1880 (*G. C. Champion*): BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*): SACATEPEQUEZ: Zapote, 2000 ft., V-VI. 1879 (*G. C. Champion*): SUCHITEPEQUEZ: San Isidro, 1600 ft., 10-23. IX. 1880 (*G. C. Champion*): RETALHULEU: Las Mercedes, 3000 ft., X-XI. 1880 (*G. C. Champion*)—COSTA RICA: CARTAGO: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*). Nineteen specimens.

### 2. *Pterophorus homodactylus* Wkr.

*Pterophorus homodactylus* Wkr. Cat. Lp. BM. **30** 941 sp. 41 (1864)<sup>1</sup>. *Lioptilus homodactylus* Wlsm. Pter. Cal-Or. pp. ix-x, xi, xvi, 50-3 Pf. **3** 8-9 (1880)<sup>2</sup>; Cqlt. Pap. **2** 62 (1882)<sup>3</sup>; Klet. Bull. Buff. Soc. NH. **4** 47, 48-51 (1882)<sup>4</sup>; H. Edw. Bull. US. Nat. Mus. **35** 137 (1889)<sup>5</sup>. *Pterophorus homodactylus* Frnld. Rp. Mass. Agr. Coll. **35** 120, 121-2 (=sep. pp. 38, 39-40) Pf. 4 · 1-2 (I. 1898)<sup>6</sup>; Spcl. Bull. Hatch Exp-Stn. Mass. Agr. Coll. 40, 41-2 Pf. 4 · 1-2 (30. VII. 1898)<sup>7</sup>; Wlsm. Ent. Mo. Mag. **34** 193 (1898)<sup>8</sup>; Frnld. Bull. US. Nat. Mus. **52** 445 sp. 4962 (1902)<sup>9</sup>; Meyr. Gn. Ins. Wytsm. **100** (Lp-Het. Pter.) 16 sp. 45 (1910)<sup>10</sup>; Lp. Cat. Junk **17** 24 (1913)<sup>11</sup>.

*Type* ♂ (1844:1, *United States*) BM.

*Hab. AMERICA, N-C. Canada*<sup>11</sup>. *United States*<sup>1-11</sup>—NEW YORK<sup>4, 11</sup>: Buffalo, ⊕ *Eupatorium purpureum*, V-VI. ex. VI. (*D. S. Kellicott*)<sup>4-7</sup>—COLORADO: LARIMER: Loveland, 5000 ft., VII. 1891 (*W. G. Smith*)—OREGON<sup>2, 6-7, 9, 11</sup>: JOSEPHINE<sup>2</sup>: Siskiyou Mts., 15. VI. 1872 (*Wlsm.*)<sup>2</sup>—CALIFORNIA<sup>2, 6-7, 9, 11</sup>: SHASTA<sup>2</sup>: Hatchet Creek, 14-17. VII. 1871 (*Wlsm.*): SISKIYOU<sup>2</sup>: Mt. Shasta, VIII. 1871 (*Wlsm.*)<sup>2</sup>: [loc. ?], ⊕ *Solidago missouriensis*, VI. ex 28. VI. (*D. W. Coquillett*)<sup>3, 5-7, 9</sup>. *Central America*—MEXICO: GUERRERO: Sierra de las Aguas Escondidas, 9500 ft., VII. (*H. H. Smith*); Omilteme, VII. (*H. H. Smith*).



### 3. *Pterophorus sublatus*, sp. n.

*Antennae* pale fawn. *Palpi* very minute, slender; whitish. *Head* white, with a pale fawn-brown collar behind. *Thorax* white, dusted with pale fawn. *Forewings* white, dusted with pale fawn, especially in a subcostal shade from near the base to near the apex, and peppered with a few darker brownish scales; cilia of the apical lobe pale fawn-brownish, with a few white costal scales and a small white dorsal spot before the apex; cilia of the tornal lobe whitish along its upper edge, mottled with white and pale fawn-brown about the tornus and dorsum. *Exp. al.* 17-18 mm. *Hindwings* pale brownish grey; cilia pale fawn-brownish. *Abdomen* white, dusted with pale fawn. *Hind Legs* white, unspotted. *Type* ♀ (65469, *Amula*); ♂ (65472, *Omiteme*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO; GUERRERO: *Amula*, 6000 ft., VIII. (*H. H. Smith*); *Omiteme*, 8000 ft., VII. (*H. H. Smith*). Four specimens.

### 4. *Pterophorus mollis*, sp. n.

*Antennae* bone-white. *Palpi* very short, not projecting beyond the head; whitish ochreous. *Head* and *Thorax* whitish ochreous. *Forewings* bone-white, overlaid with whitish ochreous, becoming more strongly ochreous along the fold, before the fissure, and beneath the costa to the apex; cilia whitish, slightly tinged with ochreous along the dorsum; there is no spot before the fissure. *Exp. al.* 16-17 mm. *Hindwings* shining, bone-whitish; cilia faintly tinged with ochreous, except about the apices of the lobes; underside with a comb of dark brown scales along the media. *Abdomen* long, slender, whitish ochreous. *Legs* white.

*Type* ♂ (65506, *Cerro Zunil*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* Central America—GUATEMALA: SACATEPEQUEZ: *Zapote*, Volcan de Fuego, 2000 ft., V-VI. 1879 (*G. C. Champion*); SOLOLA: Volcan de Atitlan, 2500-3500 ft., XII. 1880 (*G. C. Champion*); QUEZALTENANGO: *Cerro Zunil*, 4000-5000 ft., 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*). Seven specimens.

### 5. *Pterophorus emmorus*, sp. n.

*Antennae* pale ochreous. *Palpi* (broken). *Head* and front of *Thorax* whitish ochreous, a broad brownish ochreous band across the thorax and tegulae. *Forewings* pale ochreous, with a broad brownish ochreous diffused shade commencing at the middle of the base and extending to the apex, a pale line running through it along the middle of the apical lobe, the costa also narrowly pale throughout; cilia at the apex brownish ochreous, paler within the fissure. *Exp. al.* 21-8 mm. *Hindwings* shining, pale aeneous; cilia with a slight brownish tinge. *Abdomen* brownish ochreous. *Hind Legs* pale brownish ochreous, not tufted.

*Type* ♀ (4618, *Jalapa*); ♂ (65436, *Orizaba*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: *Jalapa*, 4500 ft., 1887 (*W. Schaus*); *Orizaba*, XII. 1887 (*F. D. Godman & O. Salvin*). Two specimens.

### 6. *Pterophorus grandis* Fish.

*Lioptilus grandis* Fish Can. Ent. 13 141 (1881)<sup>1</sup>. *Pterophorus grandis* Frnld. Rp. Mass. Agr. Coll. 35 120, 130-1 [=sep. pp. 38, 48] Pf. 5·9-10 (I. 1898)<sup>2</sup>; Spcl. Bull. Hatch Exp-Stn. Mass. Agr. Coll. 40, 50 Pf. 5·9-10 (VII. 1898)<sup>3</sup>; Wlsm. Ent. Mo. Mag. 34 195 (1898)<sup>4</sup>; Frnld. Bull. US. Nat. Mus. 52 446 sp. 4979 (1902)<sup>5</sup>; Meyr. Gn. Ins. Wytms. 100 (Lp-Het. Pter.) 17 sp. 54 (1910)<sup>6</sup>; Lp. Cat. Junk 17 25 (1913)<sup>7</sup>.

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Type ♂ (*Fish Coll.*) Mus. Frnld.

*Hab.* AMERICA, N-C. United States <sup>1-7</sup>—FLORIDA, 1884 (*H. K. Morrison*)—CALIFORNIA (*H. Edwards*; *J. Behrens*; *J. S. Bailey*) <sup>1-7</sup>. Central America—MEXICO: VERA CRUZ: Jalapa, 4500 ft. (*M. Trujillo*; *W. Schaus*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*): TOTONICAPAM: Totonicapam, 8500-10,500 ft., VIII. 1880 (*G. C. Champion*).

The Central American specimens are in poor condition.

### 7. *Pterophorus monodactylus* L.

=*pterodactyla* Hb.; =*cineridactylus* Fitch; =*naevosidactylus* Fitch; =*pergracilidactylus* Pkrd.

*Phalaena Alucita monodactyla* L. Syst. Nat. (ed. 10) 1 542 sp. 300 (1758) <sup>1</sup>. *Alucita pterodactyla* Hb. Smlg. Eur. Schm. 9 Pf. 1·4 (1804) <sup>2</sup>. *Pterophorus cineridactylus* Fitch Tr. N-Y. Agr. Soc. 14 848 [=Rp. 1 144] (1855) <sup>3</sup>. *Pterophorus naevosidactylus* Fitch Tr. N-Y. Agr. Soc. 14 849 [=Rp. 1 145] (1855) <sup>4</sup>. *Pterophorus pergracilidactylus* Pkrd. Ann. Lyc. NH. N-Y. 10 265-6 (1873) <sup>5</sup>. *Pterophorus monodactylus* Wlsm. Pter. Cal-Or. pp. x, xvi, 39-41 Pf. 2·16, 3·1 (1880) <sup>6</sup>; Frnld. Rp. Mass. Agr. Coll. 35 120, 130-1 [=sep. pp. 38, 48-9] Pf. 1·1-13, 2·3-4, 7·1-5 (I. 1898) <sup>7</sup>; Spcl. Bull. Hatch Exp-Stn. Mass. Agr. Coll. 40, 51-2 Pf. 1·1-13, 3·3-4, 7·1-5 (VII. 1898) <sup>8</sup>; Stgr-Rbl. Cat. Lp. Pal. 2 75 sp. 1387 (1901) <sup>9</sup>; Frnld. Bull. US. Nat. Mus. 52 446 sp. 4981 (1902) <sup>10</sup>. *Emmelina monodactyla* Tutt Ent. Rec. 17 37 (1905) <sup>11</sup>; Br. Lp. 5 70-5, 79, 85-90, 92-3, 97, 101, 105-6, 110, 115, 118, 120-1, 338, 360, 379, 386 (1906) <sup>12</sup>. *Pterophorus monodactylus* Wlsm. Pr. Z. Soc. Lond. 1907 919-20 sp. 8 (1908) <sup>13</sup>; Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 17 sp. 81 (1910) <sup>14</sup>; Lp. Cat. Junk 17 26 (1913) <sup>15</sup>.

*Hab.* AFRICA, N-I. <sup>9-10, 13-15</sup>—ALGERIA: CONSTANTINE: Constantine, 26. X. 1895 (*A. E. Eaton*); Bône, 21-7. IV. 1893 (*A. E. Eaton*)—TUNIS: Bône Guelma, Tunis, 5. XII. 1893 (*A. E. Eaton*). EUROPE <sup>1-2, 6-15</sup>. ASIA <sup>9-10, 13-15</sup>—ASIATIC TURKEY: HALEB: Shar Deresy, 1893 (*Nat. Coll.*)—KASHMIR: Goorais Valley, 7000 ft., VI. 1887 (*J. H. Leech*)—JAPAN (*H. J. S. Pryer*). AMERICA, N-C. United States <sup>3-10, 13-15</sup>—MAINE to CALIFORNIA <sup>7-8, 10</sup>, ⊕ *Convolvulus sepium*, *arvensis*, *Chenopodium album*, *Atriplex patula* <sup>7-8</sup>—CALIFORNIA <sup>6</sup>: SONOMA: Russian River, 19. V. 1871 (*Wlsm.*): MENDOCINO: Head of Noyo River, 8-11. VI. 1871 (*Wlsm.*); near Little Lake, 12. VI. 1871 (*Wlsm.*); Potter's Valley, Coal Creek Cañon, 13. VI. 1871 (*Wlsm.*): COLUSA: North Fork, Cache Creek, 24-5. VI. 1871 (*Wlsm.*); Bear Valley, 27. VI. 1871 (*Wlsm.*): SISKIYOU: McCloud's Creek, 29-30. VII. 1871 (*Wlsm.*); Winchester, 31. VII. 1871 (*Wlsm.*); Mt. Shasta, VIII. 1871 (*Wlsm.*)—OREGON <sup>6</sup>: JOSEPHINE: Rogue River, 7. V. 1872 (*Wlsm.*). Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*).

### 8. *Pterophorus tetraonipennis*, sp. n.

*Antennae* cinereous white. *Palpi* short, porrect, slender, not reaching beyond the head; cinereous, sprinkled with brownish scales. *Head* cinereous white. *Thorax* brownish cinereous. *Forewings* brownish cinereous, sprinkled and mottled with umber-brown, of which there is a narrow shade along the costa

and a more diffuse shade along the fold, with a patch between them at about one-fourth and another preceding the fissure, the latter projected outward along the opposite margins of the fissure itself, but somewhat broken up by paler interspaces; on the costa, beyond the base of the fissure, is an elongate dark umber shade-spot followed by a smaller one at the bend of the apical lobe; a dark shade-line runs through the basal half of the cilia, which, with the exception of a dark shade-spot near the apex, on the lower edge of the apical lobe, are pale cinereous around both lobes. *Exp. al.* 15–18 mm. *Hindwings* and cilia brownish grey. *Abdomen* and *Legs* pale cinereous, profusely dusted with umber-brown; spurs pale.

*Type* ♂ (65497, *Cerro Zunil*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., 1880 (*G. C. Champion*): RETALHULEU: Las Mercedes, 3000 ft., 1880 (*G. C. Champion*).

### 9. *Pterophorus lienigianus* Z.

= *serindibanus* Moore<sup>8</sup>.

*Pterophorus lienigianus* Z. Linn. Ent. 6 380–1 sp. 39 (1852)<sup>1</sup>. *Lioptilus lienigianus* Wlsm. Pter. Cal-Or. 55, 59 (1880)<sup>2</sup>. *Leioptilus serindibanus* Moore Lp. Ceyl. 3 527–8 Pf. 209·14 (1887)<sup>3</sup>. *Leioptilus lienigianus* O. Hfm. Ber. NW. Ver. Regensb. 5 164, 171–2 sp. 6 (1896)<sup>4</sup>. *Pterophorus lienigianus* Stgr-Rbl. Cat. Lp. Pal. 2 75 sp. 1389 (1901)<sup>5</sup>. *Ovendenia septodactyla* (= *lienigianus* Z) Tutt. Ent. Rec. 17 37, 41 (1905)<sup>6</sup>: Br. Lp. 5 79–82, 84–5, 87–90, 93–4, 97, 99, 101, 111, 118, 153, 253, 264, 285, 386, 395–6, 398, 409, 484–5, 487–8 (1906)<sup>7</sup>. *Pterophorus lienigianus* Fltchr. Spolia Zeyl. 6 34–5 (1909)<sup>8</sup>; Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 15 sp. 9 (1910)<sup>9</sup>: Lp. Cat. Junk 17 22 (1913)<sup>10</sup>.

*Types* ♂ ♀: *lienigianus* Z., ♂ ♀ Mus. Wlsm. (*Zell. Coll.*) BM.; *serindibanus* Moore, ♂ (1894: 106) BM.

*Hab.* AFRICA, W-S.<sup>10</sup>. EUROPE<sup>1–2, 4–10</sup>, ⊕ *Artemisia vulgaris*<sup>4</sup>. ASIA<sup>3, 8–10</sup>—CEYLON<sup>3, 8–10</sup>—INDIA<sup>8–10</sup>—COREA: Gensan, VI. 1886 (*J. H. Leech*)—JAPAN: KIUSIU: Nagasaki, VI. 1886 (*J. H. Leech*). AMERICA, N-C. United States—ARIZONA: 1882 (*H. K. Morrison*). Central America—MEXICO: MORELOS: Cuernavaca, VI. (*H. H. Smith*): GUERRERO: Omilteme, 8000 ft., VII. (*H. H. Smith*): TABASCO: Teapa, III. (*H. H. Smith*)—GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., 1880 (*G. C. Champion*).

### 10. *Pterophorus tinctus*, sp. n.

*Antennae* whitish. *Palpi* slender, porrect, reaching half the length of the head beyond it; whitish. *Head* and face ochreous, whitish on the crown. *Thorax* pale ochreous. *Forewings* pale ochreous, strongly tinged with brownish ochreous on the costal half, along the cell, and nearly to the apex; on the apical lobe an obliquely curved reddish brown spot at the base of the fissure, an elongate dark fuscous spot on the costa, above the basal half of the fissure, separated by a pale spot from a few fuscous scales beyond it; a minute blackish spot on the lower edge of the apical lobe, between which and the apex the cilia are reddish brown, the remaining cilia above and below the lobe being pale ochreous; the dorsal cilia of the tornal lobe are also tinged with reddish brown. *Exp. al.* 15 mm. *Hindwings* and cilia shining, yellowish brown. *Abdomen* pale ochreous. *Legs* whitish, the hind tibiae and tarsi smeared with brownish fuscous.

*Type* ♀ (35514) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Two specimens, one much injured.

### 11. *Pterophorus urbanus*, sp. n.

*Antennae* whitish ochreous; the basal joint with a few projecting scales at its apex. *Palpi* short, slender, porrect; whitish ochreous. *Head* and *Thorax* pale ochreous. *Forewings* pale ochreous, slightly suffused with brownish ochreous, except, or in a less degree, on the tornal lobe; a slender, obliquely curved, dark brown marginal line at the base of the fissure, and above the outer end of this a short dark brown marginal spot on the costa, followed by a few dark brown scales indicating two minute spots in the cilia beyond it; nearer to the apex is a rather stronger dark brown spot on the lower edge of the lobe; cilia very pale ochreous, becoming pale brownish ochreous on the dorsum of the tornal lobe. *Exp. al.* 14 mm. *Hindwings* and cilia shining, light brownish cupreous. *Abdomen* pale ochreous. *Legs* whitish, with a slight ochreous tinge, the last two joints of the hind tarsi touched with brown.

*Type* ♀ (65513) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 2950 ft., 1880 (G. C. Champion).  
Unique.

### 12. *Pterophorus ignifugax*, sp. n.

*Antennae* whitish ochreous. *Palpi* not projecting beyond the head; pale ochreous. *Head* whitish above, with a brown collar posteriorly. *Thorax* pale ochreous. *Forewings* pale ochreous, sparsely dusted with fawn-brown along the costa and below the fold, a brownish fuscous spot on the disc at one-third, another before the fissure with an elongate costal spot above it; the slightly shaded end of the apical lobe carries three small brownish fuscous spots, one costal, one at the apex, and one on its lower margin, giving colour to the otherwise pale ochreous cilia; a small brownish fuscous dot at the apex of the tornal lobe precedes a shade of the same in the cilia at its apex, below which they are pale ochreous, and there are three other small spots, two terminal and one dorsal. *Exp. al.* 23–26 mm. *Hindwings* pale greyish brown; cilia pale ochreous; the median lobe slightly widened before the apex. *Abdomen* pale brownish ochreous, with about eight brown dots along its terminal half, in two rows of four each. *Legs* pale ochreous, with some brown dusting about the bases of the tibial spurs.

*Type* ♀ (65437, Totoncapam) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879–80 (G. C. Champion):  
TOTONICAPAM: Totoncapam, 8500–10,500 ft., VIII. 1880 (G. C. Champion). Four specimens.

### 13. *Pterophorus eupatorii* Frnld.

=*\*cretidactylus* [nec Fitch] Z.<sup>3</sup>, Wlsm.<sup>3</sup>

*Oedematophorus \*cretidactylus* Z. Verh. ZB. Ges. Wien 24: 1874 Abh. 444 (1874)<sup>1</sup>: Wlsm. Pter. Cal-Or. pp. viii–ix, xi, xvi, 35–6 (1880)<sup>2</sup>. *Alucita eupatorii* Frnld. Can. Ent. 25 96 (1893)<sup>3</sup>. *Pterophorus eupatorii* Frnld. Rp. Mass. Agr. Coll. 35 120, 132 [=sep. pp. 38, 50] Pf. 5 15–16 (I. 1898)<sup>4</sup>: Spcl. Bull. Hatch Exp-Stn. Mass. Agr. Coll. 40, 52–3 Pf. 5 15–16 (VII. 1898)<sup>5</sup>; Wlsm. Ent. Mo. Mag. 34 194–5 (1898)<sup>6</sup>; Frnld. Bull. US. Nat. Mus. 52 446 sp. 4983 (1902)<sup>7</sup>; Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 17 sp. 60 (1910)<sup>8</sup>: Lp. Cat. Junk 17 25 (1913)<sup>9</sup>.

*Type* ♀ (= *\*cretidactylus* Z., 102269, Vancouver) Mus. Wlsm. (Zell. Coll.) BM.

*Hab.* AMERICA, N-C. Canada<sup>1–5, 7, 9</sup>—VANCOUVER I.: VIII. (G. F. Mathew)<sup>1–5, 7, 9</sup>; Esquimalt, 1882 (J. J. Walker). United States<sup>2–9</sup>—NEW YORK<sup>4–5, 7, 9</sup>: Buffalo, ⊕ *Eupatorium purpureum* (D. S. Kellicott)<sup>3–5</sup>—CALIFORNIA<sup>2–7, 9</sup>: SHASTA: Bear Creek, 27–8. VII. 1871 (Wlsm.): SISKIYOU: Mt. Shasta, VIII. 1871 (Wlsm.). Central America—MEXICO: VERA CRUZ: Atoyac, IV. (H. H. Smith): MORELOS: Amecameca, IV. 1888

(*F. D. Godman*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879–80 (*G. C. Champion*): SUCHITEPEQUEZ: San Isidro, 1600 ft., IX. 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881 (*G. C. Champion*).

#### 14. *Pterophorus praealtus*, sp. n.

*Antennae* yellowish white, barred above with dark brown throughout. *Palpi* short, scarcely projecting beyond the face; yellowish white, shaded with dark brown on their outer sides. *Head* white, with a distinct brown collar above. *Thorax* yellowish white, slightly brown-shaded, the ends of the tegulae tipped with brown scales. *Forewings* white, much sprinkled with dark brown scales, which form a narrow and slightly diffused line along the costa, interrupted before and beyond by a broad costal patch at three-fourths, produced obliquely inward to the base of the fissure and thence diffused outward to the tornus and termen; this is preceded by a dark spot on the middle of the cell, with another on the dorsum a little beyond it, and a costal spot before the apex is followed by another on the lower margin of the apical lobe; cilia marked with alternating white and brown patches. *Exp. al.* 22–4 mm. *Hindwings* greyish brown; hind lobe simple. *Abdomen* white, with transverse brown bars and mottling. *Legs* white, sprinkled and banded with brown.

*Type* ♂ (65491, *Totonicapam*) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* GUATEMALA: ALTA VERA PAZ: Balheu, 3850 ft., 3–5. II. 1880 (*G. C. Champion*): BAJA VERA PAZ: San Gerónimo, 1879–80 (*G. C. Champion*): TOTONICAPAM: Totonicapam, 8500–10,500 ft., VIII. 1880 (*G. C. Champion*). Three specimens.

Most nearly allied to *conjunctus* Z., but somewhat smaller.

#### 15. *Pterophorus phlegmaticus*, sp. n.

*Antennae* brownish cinereous. *Palpi* short, smooth, suberect, slender; brownish cinereous. *Head* dark brown, paler beneath the antennae. *Thorax* dirty whitish, thickly shaded with dark brownish fuscous behind the anterior margin. *Forewings* pale brownish cinereous, profusely dusted with dark brownish fuscous and whitish scales, the white prevailing along the costa, especially at the base, and at the base of the fissure, up to which point the dark brown dusting is thickly distributed from the base, extending also conspicuously along the fold; it is also somewhat concentrated along the costa above the fissure, but without forming any distinct spots, although one, a little beyond the base of the fissure, is somewhat strongly indicated; cilia dark tawny brownish, somewhat paler on the dorsum; a small dark spot is indicated on the lower margin of each lobe before its apex. *Exp. al.* 18 mm. *Hindwings* and cilia pale brownish cinereous, rather shining. *Abdomen* brownish cinereous, whitish toward the base. *Legs* whitish.

*Type* ♀ (65501) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*). Unique.

#### 16. *Pterophorus correptus*, sp. n.

*Antennae* cinereous. *Palpi* projecting scarcely half the length of the head beyond it; brownish cinereous. *Head* brown above, paler between the antennae. *Forewings* whitish cinereous, suffused with pale brownish ochreous, and sparsely sprinkled with brownish fuscous scales; the whitish cinereous ground-colour becomes almost white along the lower margin of the apical lobe, at the extreme base of the costa, and in sprinkled scales before the fissure—also towards the apex of the tornal lobe; the brown scaling is slightly concentrated in the fold near the base and in a small spot before the fissure, and much concentrated in a distinct elongate spot on the costa beyond the base of the fissure, followed by two others, more faintly indicated, but containing one or two black scales, a small dorsal spot before the tip of the apical lobe being also black; there are three smaller spots along the lower margin of the tornal



lobe; cilia within the fissure dark smoky brown, the dorsal cilia also smoky, but slightly paler. *Exp. al.* 20–21 mm. *Hindwings* pale brownish cinereous, cilia smoky brown. *Abdomen* brownish cinereous. *Legs* whitish.

*Type* ♂ (65502); ♀ (65503) *Orizaba*, Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* Central America—MEXICO: VERA CRUZ: Orizaba, XII. 1887 (*F. D. Godman*)—GUATEMALA: QUEZALTENANGO: Cerro Zunil, 4000–5000 ft., 1880 (*G. C. Champion*). Four specimens.

### 17. *Pterophorus inquinatus* Z.

= *ambrosiae* Mrtf.<sup>6</sup>.

*Oedematophorus inquinatus* Z. Verh. ZB. Ges. Wien **23**: 1873 Abh. 325 sp. 8 (1873)<sup>1</sup>; Mrtf. Am. Ent. **3** 235, 236 (1880)<sup>2</sup>. *Oedematophorus ambrosiae* Mrtf. Am. Ent. **3** 236 (1880)<sup>3</sup>. *Oedematophorus inquinatus* Cq. Pap. **2** 61–2 (1882)<sup>4</sup>; Hdm. Stett. Ent. Ztg. **57** 9 sp. 79 (1896)<sup>5</sup>. *Pterophorus inquinatus* Wlsm. Pr. Z. Soc. Lond. **1897** 59 sp. 7 (1897)<sup>6</sup>; Frnld. Rp. Mass. Agr. Coll. **35** 120, 135–6 [=sep. pp. 38, 53–4] Pf. **3** 5–6, 4 3–4, (*ambrosiae*) Pf. **6** 14–17 (I. 1898)<sup>7</sup>; Spcl. Bull. Hatch Exp-Stn. Mass. Agr. Coll. 40, 56–7 Pf. **3** 5–6, 4 3–4, (*ambrosiae*) Pf. **6** 14–17 (30. VII. 1898)<sup>8</sup>; Wlsm. Ent. Mo. Mag. **34** 195 (1898)<sup>9</sup>; Frnld. Bull. US. Nat. Mus. **52** 447 sp. 4990 (1902)<sup>10</sup>; Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 17 sp. 65 (1910)<sup>11</sup>; Lp. Cat. Junk **17** 25 (1913)<sup>12</sup>.

*Type* ♀: *inquinatus* Z. (102276, *Texas*), Mus. Wlsm. (*Zell. Coll.*) BM.

*Hab.* AMERICA, N-C-I. United States<sup>1–12</sup>—WISCONSIN, 1883 (*H. K. Morrison*)—NORTH CAROLINA, 1883 (*H. K. Morrison*)—MISSOURI<sup>2–3, 6–8, 10, 12</sup>: ⊕ *Ambrosia artemisiaefolia*<sup>2–4, 6–8</sup>, VI–VII, ex VIII.<sup>4, 6</sup>—COLORADO<sup>7–8, 10, 12</sup>: LARIMER: Loveland, 5000 ft., VII. 1891 (*W. G. Smith*)—FLORIDA, 1883 (*H. K. Morrison*)—ALABAMA<sup>7–8, 10, 12</sup>—TEXAS<sup>1, 5–8, 10, 12</sup>, VII.<sup>1, 6</sup>—ARIZONA<sup>7–8, 10, 12</sup>: 1881 (*H. K. Morrison*). Central America—MEXICO: VERA CRUZ: Jalapa (*M. Trujillo*); Orizaba, XII. 1887 (*F. D. Godman*). West Indies<sup>5–6, 9–12</sup>—HAYTI<sup>6, 9</sup>: HAYTI<sup>6, 9</sup>: Cap Haiti, 19. VI. (*F. Gudmann*)<sup>6, 9</sup>—ST. THOMAS, 7. IV. (*W. von Hedemann*)<sup>5–6, 9</sup>.

### 18. *Pterophorus grisescens* Wlsm.

*Oedematophorus grisescens* Wlsm. Pter. Cal-Or. pp. viii, xvi, 34–5 Pf. **2** 11 (1880)<sup>1</sup>. *Pterophorus grisescens* Frnld. Rp. Mass. Agr. Coll. **35** 120, 135 [=sep. pp. 38, 53] (I. 1898)<sup>2</sup>; Spcl. Bull. Hatch Exp-Stn. Mass. Agr. Coll. 40, 55–6 (VII. 1898)<sup>3</sup>; Wlsm. Ent. Mo. Mag. **34** 195 (1898)<sup>4</sup>; Frnld. Bull. US. Nat. Mus. **52** 447 sp. 4989 (1902)<sup>5</sup>; Meyr. Gn. Ins. Wytsm. **100** (Lp-Het. Pter.) 17 sp. 70 (1910)<sup>6</sup>; Lp. Cat. Junk **17** 25 (1913)<sup>7</sup>.

*Type* ♂ (92539); ♀ (92540) *Rogue River*, Mus. Wlsm. BM.

*Hab.* AMERICA, N-C. United States<sup>1–7</sup>—COLORADO<sup>4, 7</sup>: CUSTER: Willow Creek, Cusack Range, 8300 ft., 25. VII. 1889 (*T. D. A. Cockerell*): LARIMER, Loveland, 5000 ft., VII. 1891 (*W. G. Smith*)—ARIZONA<sup>4, 7</sup>: 1881 (*H. K. Morrison*)—CALIFORNIA: SHASTA: Pitt River (=Upper Sacramento River), 21–6. VII. 1871 (*Wlsm.*)—OREGON<sup>1–5, 7</sup>: JOSEPHINE<sup>1</sup>: Rogue River, ⊕ *Artemisia* sp., 7. V, ex. 1872 (*Wlsm.*)<sup>1</sup>. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*).

19. *Pterophorus aethes*, sp. n.

*Antennae* pale cinereous, barred with dark brown above. *Palpi* short, porrect, scarcely extending beyond the head; pale fawn-brown. *Head* and *Thorax* pale fawn-brownish. *Forewings* pale fawn-brown, mixed with pale cinereous and some dark fuscous scaling, the latter especially along the basal half of the costa, in a median shade extending obliquely upward to the costa beyond the base of the fissure, and around the apex and apical cilia of both lobes; a patch of raised pale fawn-brown scales occurs at the base of the fissure—these scales arranged obliquely, and, when not worn, overlapping the base of the tornal lobe nearly to the dorsum; another small patch of raised scales occurs on the fold half-way between these and the base. *Exp. al.* 19 mm. *Hindwings* and cilia greyish brown. *Abdomen* fawn-brownish, mixed with cinereous and fuscous. *Legs* pale cinereous, with some dark brown scaling about the base of the spurs.

*Type* ♂ (4787, Jalapa) Mus. Wlsm. BM.

*Hab.* MEXICO: VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*); Atoyac, IV. (*H. H. Smith*); GUERRERO: Amula, 6000 ft., VIII–IX. (*H. H. Smith*). Four specimens.

This is the only species of *Pterophoridae* in which I have observed a distinct tuft of raised scales. It is apparently allied to *nodipes* Z., the type of which shows indications that scales near the fissure may be somewhat raised in specimens in fine condition.

20. *Pterophorus phloeochroa*, sp. n.

*Antennae* pale brownish. *Palpi* short, slender; brownish. *Head* and *Thorax* bark-brown, the latter speckled with pale cinereous. *Forewings* bark-brown, more or less profusely speckled with pale cinereous which tends to costal accumulations on either side of a dark spot before the middle of the apical lobe, some dorsal accumulation beyond the middle of the same, and two faint bands across the tornal lobe—one from the base of the fissure, the other beyond the middle of the lobe; cilia brownish. *Exp. al.* 23–24 mm. *Hindwings* and cilia a little paler than the forewings and rather less reddish brown. *Abdomen* brownish, dusted with pale cinereous, especially at the sides and at the base above. *Hind Legs* brownish, the slightly tufted tibiae, spurs, and first tarsal joint sprinkled with whitish cinereous.

*Type* ♂ (65401, Amula) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* Central America—MEXICO: VERA CRUZ: Orizaba, XII. 1887 (*F. D. Godman*); GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*)—GUATEMALA: ALTA VERA PAZ: Chiacam, II–III. 1880 (*G. C. Champion*); QUEZALTENANGO: Cerro Zunil, 4000 ft., 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 2000–3000 ft., 1881–2 (*G. C. Champion*). Five specimens.

21. *Pterophorus nodipes* Z.

*Mimeseoptilus* (*Oedematophorus*) *nodipes* Z. Hor. Soc. Ent. Ross. 13 473–5 sp. 4 Pf. 6·166 (1877)<sup>1</sup>.  
*Pterophorus nodipes* Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 17 sp. 75 (1877)<sup>2</sup>; Lp. Cat. Junk 17 26 (1913)<sup>3</sup>.

*Type* ♂ (102256); ♀ (102257) Mus. Wlsm. (*Zell. Coll.*) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII. (*H. H. Smith*). South America<sup>1–3</sup>—COLOMBIA<sup>1,3</sup>: CUNDINAMARCA<sup>1</sup>: Bogota, III. (*Baron von Nolcken*).

## 22. *Pterophorus longifrons*, sp. n.

*Antennae* hoary whitish. *Palpi* hoary grey; very long, porrect, projecting more than a millimetre beyond the eyes, closely clothed, but smooth; the terminal joint short, also clothed. *Head* hoary grey, with long projecting tuft of closely packed scales projecting more than half the length of the palpi. *Thorax* hoary grey. *Forewings* narrow, elongate, the lobes tapering; hoary grey, besprinkled with fuscous scales as far as the fissure, and beyond it to the termen below the fissure; a small dark spot lies on the disc at a little beyond one-third, another at the end of the cell, and above and scarcely beyond this is a small costal spot of the same colour; cilia scarcely paler than the wing. *Exp. al.* 25 mm. *Hindwings* and cilia brown-grey. *Abdomen* hoary whitish (broken in the middle). *Legs* white, shaded externally with fuscous.

*Type* ♂ (65425) Mus. Wlsm. (*Godm-Salv. Coll.*) BM.

*Hab.* MEXICO: GUERRERO: Omilteme, VII. (*H. H. Smith*). Unique.

## UTUCA Wkr.

*Type*: *Utuca ochracealis* Wkr. (Wkr. 1864).

UTUCA Wkr. Cat. Lp. BM. 30 951 no. 7 sp. 1 (1864); Wlsm. Ent. Mo. Mag. 27 260-1 (1891): Nov. Lp. 1 85-7 Pf. 12·7 (1892); Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 4, 19-20, no. 18 sp. 1-2 (1910): Lp. Cat. Junk 17 31 (1913).

### 1. *Utuca ochracealis* Wkr.

*Utuca ochracealis* Wkr. Cat. Lp. BM. 30 951 sp. 1 (1864)<sup>1</sup>; Wlsm. Ent. Mo. Mag. 27 261 (1891)<sup>2</sup>; Nov. Lp. 1 86-7 Pf. 12·7 (1892)<sup>3</sup>; Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 20 sp. 2 (1910)<sup>4</sup>; Lp. Cat. Junk 17 31 (1913)<sup>5</sup>.

*Type* ♂ (1858: 84, *Ega*) BM.

*Hab.* AMERICA, C-S. Central America—NICARAGUA: Chontales (*T. Belt*). South America<sup>1-5</sup>—COLOMBIA<sup>2-3</sup>: TOLIMA: La Industria Hacienda, Guarino (near Honda), 12. IV - 1. V. (*Baron von Nolcken*)<sup>2-3</sup>—BRAZIL<sup>1-3, 5</sup>: AMAZONS<sup>1-3</sup>: *Ega* (*H. W. Bates*)<sup>1-3</sup>: PARA: Para (*H. W. Bates*), ⊕ . . . . ., ex. III. 1893 (*A. Schulz*).

## 2. AGDISTIDAE.

### OCHYROTICA Wlsm.

*Type*: *Ochyrotica fasciata* Wlsm. (Wlsm. 1891).

OCHYROTICA Wlsm. Ent. Mo. Mag. 27 217-8 (1891): Nov. Lp. 1 74-6 Pf. 12·2 (1892): Pr. Z. Soc. Lond. 1897 58 no. 4 sp. 5 (1897); Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 3, 20, no. 19 sp. 1-3 (1910): Lp. Cat. Junk 17 31 (1913).

### 1. *Ochyrotica fasciata* Wlsm.

*Ochyrotica fasciata* Wlsm. Ent. Mo. Mag. 27 218 (1891)<sup>1</sup>: Nov. Lp. 1 75-6 Pf. 12·2 (1910)<sup>2</sup>: Pr. Z. Soc. Lond. 1897 58 sp. 5 (1897); Meyr. Gn. Ins. Wytsm. 100 (Lp-Het. Pter.) 20 sp. 3 (1910)<sup>4</sup>: Lp. Cat. Junk 17 31 (1913)<sup>5</sup>.

*Type* ♂ (6272, *Espirito Santo*) Mus. Wlsm. BM.

*Hab.* AMERICA, C-S-I. **Central America**<sup>1-5</sup>—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 1879-80 (*G. C. Champion*): QUEZALTENANGO: Cerro Zunil, 4000-5000 ft., 1880 (*G. C. Champion*)—PANAMA: CHIRIQUI: Volcan de Chiriqui, 3000-4000 ft., 1881-2 (*G. C. Champion*). **West Indies**<sup>3-5</sup>—JAMAICA: ST. ANN: Moneague, 24. I - 11. II. 1905 (*Wlsm.*); Mont Pelier, 1. II. 1905 (*Wlsm.*); Roaring Falls, 10. II. 1905 (*Wlsm.*); Runaway Bay, 22-30. III. 1905 (*Wlsm.*)—GRENADA<sup>3</sup>: Balthazar, 250 ft., 20. IV. (*H. H. Smith*)<sup>3</sup>. **South America**<sup>1-5</sup>—BRAZIL<sup>1-3, 5</sup>: ESPIRITO SANTO<sup>1-2</sup>: Espirito Santo (*Schmidt*)<sup>1-2</sup>: SANTA CATHERINA.

The specimens from Guatemala tend to develop a second fascia, somewhat obliquely placed, between the usual transverse markings and the base of the wing. The white portions of the wing are also somewhat more dusted with golden brown than in the Type (from Espirito Santo), but one would not be justified in separating them merely on this account. It is not improbable that more species than one may be discriminated in an extended series, in which case the markings on the abdomen (unfortunately missing in the Type) may probably be of value in distinguishing them. In Jamaica the species was usually found in shady places among high brush-wood.

## ORNEODINA.

### 1. ORNEODIDAE.

#### ORNEODES Ltr.

= *RIPIDOPHORA* Hb. ; = *EUCHIRADIA* Hb. ; = \**ALUCITA* Z.

Type: *Alucita hexadactyla* L. (= *hexadactylus* F. ; Ltr. 1802).

ORNEODES Ltr. [Préc. Car. Gn. Ins. 148 no. 20 (1796) MN.] HN. Crust-Ins. 3 418 (1802) : 14 258 no. 458 (1804-5). *RIPIDOPHORA* Hb. Tent. 2 (1806). *EUCHIRADIA* Hb. Verz. Schm. 431 sp. 4196-8 (1826). \**ALUCITA* (Z.) Stgr-Wk. Cat. Lp. Eur. 345-6 no. 316 sp. 3205-13 (1871) ; Z. Hor. Soc. Ent. Ross. 13 486-7 Pf. 6 172 (1877). ORNEODES Wlsm. Pr. Z. Soc. Lond. 1897 61-2 no. 7 sp. 18 (1897) ; Stgr-Rbl. Cat. Lp. Pal. 2 78 no. 217 sp. 1431-9 (1901) ; Frnld. Bull. US. Nat. Mus. 52 448 sp. 4997 (1902) ; Meyr. Gn. Ins. Wytsm. 108 (Lp-Het. Orn.) 2-3 no. 1 sp. 1-38 Pf. [1] 1-14 (1910) ; Lp. Cat. Junk 17 40-2 (1913).

#### 1. *Orneodes punctiferella* Wkr.

*Alucita punctiferella* Wkr. Cat. Lp. BM. 35 1846 (1866)<sup>1</sup>. *Orneodes punctiferella* Meyr. Gn. Ins. Wytsm. 108 (Lp-Het. Orn.) 3 sp. 23 (1910)<sup>2</sup> ; Lp. Cat. Junk 17 41 (1913)<sup>3</sup>.

Type ♀ (1845:123) BM.

*Hab.* **Central America**<sup>1-3</sup>—BRITISH HONDURAS (*D. Dyson*)<sup>1, 3</sup> [= \**HONDURAS*<sup>1, 3</sup>].  
BIOL. CENTR.-AMER., Heter., Vol. IV., June 1915. 3 mm

## 2. *Orneodes flavicincta*, sp. n.

*Antennae* pale cinereous, barred with greyish fuscous above. *Palpi* extending the length of the head beyond it; pale cinereous, with a fuscous spot at the end of the median joint, another on the terminal beneath. *Head* pale cinereous, with two narrow transverse fuscous bars. *Thorax* pale cinereous, speckled with fuscous. *Fore- and Hindwings* pale cinereous, with fuscous and some blackish speckling; the wings are marked with the usual sinuate greyish fuscous bands, more or less outlined with whitish cinereous specks, but between them the intermediate space is occupied by a pale yellow ochreous band, more clearly defined on the fore- than on the hindwings; there is also a narrower stripe of the same colour beyond the outer fuscous band; these bands are all gently sinuate, without noticeably prominent projections; the bases of the lobes of the hindwings are minutely reticulate with blackish scaling, a blackish spot lying at the junction of the anterior two lobes. *Exp. al.* 10-11 mm. *Abdomen* greyish fuscous. *Legs* whitish cinereous.

*Type* ♂ (97229, Moneague) Mus. Wlsm. BM.

*Hab.* AMERICA, C-I. Central America—MEXICO: TABASCO: Teapa, III. (H. H. Smith). West Indies—JAMAICA: ST. ANN: Moneague, 19. I – 4. II. 1905 (Wlsm.); Runaway Bay, 1. IV. 1905 (Wlsm.). Eight specimens.

Nearly allied to the Australian species *phricodes* Meyr., but differing in the shorter and more recurved palpi, and in the less numerous dark bars on the apical lobes of the forewings.

## 3. *Orneodes nasuta* Z.

*Alucita nasuta* Z. Hor. Soc. Ent. Ross. 13: 486-7 sp. 1 Pf. 6: 172 (1877)<sup>1</sup>. *Orneodes nasuta* Meyr.

Gn. Ins. Wytsm. 108 (Lp-Het. Orn.) 2 sp. 10 (1910)<sup>2</sup>: Lp. Cat. Junk 17: 40 (1913)<sup>3</sup>.

*Type* ♀ (102270) Mus. Wlsm. (Zell. Coll.) BM.

*Hab.* AMERICA, C-S. Central America—MEXICO: GUERRERO: Amula, 6000 ft., VIII-IX. (H. H. Smith). South America<sup>1-3</sup>—COLOMBIA<sup>1,3</sup>: CUNDINAMARCA: Ubaque, 27. III. (Baron von Nolcken)<sup>1</sup>.

Although these specimens are somewhat smaller (16 mm.) than Zeller's Type from Ubaque (18 mm.), the position of the markings is precisely similar, and one could not venture to separate them, as the more southern form is represented by only a single specimen.

## 4. *Orneodes acalles*, sp. n.

*Antennae* pale whitish ochreous, slightly barred with brown toward the base. *Palpi* long, projecting slightly upward; whitish, much shaded with brown on the outer side of the rather roughened median joint, and with a dark fuscous band around the middle of the shorter terminal joint. *Head and Thorax* whitish ochreous, sprinkled with brownish. *Forewings* pale yellowish ochreous, dotted with white, and banded with dark brown fading into golden brown; the brown bands are two, one a little beyond the middle, arising straight from the dorsum across four lobes and thence diverted obliquely outward to the apical lobe; the second, before the termen, parallel with the first; these bands are formed by the darkening of the cilia on both sides of the lobes, and do not greatly affect the colouring of the lobes themselves, they are bounded on either side by narrow white lines, affecting not only the cilia but the lobes themselves; the basal half of the outer band is distinctly dark brown, its outer half pale golden brown. *Exp. al.* 16 mm. *Hindwings* paler than the forewings, the yellowish ochreous colour being reduced, the brownish bands almost faded-out, while the white scaling is considerably increased on the



lobes and cilia; several dark brown, almost blackish, dots along the former give a prettily speckled appearance to the wing, and there is a very distinct dark brown patch before the apex of the apical and subapical lobes but affecting only the cilia of the subapical lobe on its upper margin—this patch corresponds to the outer dark band on the forewings, but is not continued. *Abdomen* pale ochreous. *Legs* white.

*Type* ♀ (65420) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* COSTA RICA: CARTAGO: Volcan de Irazu, 6000–7000 ft. (H. Rogers). Unique.

### 5. *Orneodes panolbia*, sp. n.

*Antennae* whitish. *Palpi* with the median joint extending the length of the head beyond it; dark brownish fuscous tipped with whitish; the terminal joint almost erect, half as long as the median, whitish, with a broad brownish fuscous band around the middle. *Head* whitish ochreous, mottled with brownish fuscous. *Thorax* brownish fuscous, the tegulae tipped with whitish ochreous. *Forewings* with the usual mottled appearance; the apical lobe divided into alternate spaces of dark brownish fuscous and pale yellowish ochreous, these colours separated from each other by narrow lines of white, some straight, some oblique, its dorsal cilia brownish fuscous, with two white dots, but no ochreous; the distinguishing character of the remainder of the wing is a broad brownish fuscous median band narrowly edged with white, dilated inward on the tornal and supratornal lobes, this is partially continued through the hindwings, but only in the form of narrow spots on the three anterior lobes, becoming dilated on the three posterior lobes to its greatest width on the dorsum; the base of both wings, preceding this band, is mottled with brownish fuscous, mixed with whitish and some pale ochreous, with a white spot on the base of the dorsum of the forewings; beyond the band the same colours are reproduced in succession on each lobe, the dark brown again forming a narrow band, augmented inward on the median lobe and attenuated inward to the dorsum on the tornal lobe; this band is also continued through the hindwings, conspicuously on the apical and subapical lobes, angulated inward on the median and again dilated inward more widely on the tornal lobe; the apical and subapical lobes are also tipped with brownish fuscous and the pale ochreous colouring is less in evidence on the hind- than on the forewings, while the white bars across the lobes are rather broader and more conspicuous; the cilia between the lobes, although mottled with brown, have, in a strong light, a pale bluish sheen, where they appear pale between the brown spots, but the cilia of the tornal lobe of the hindwings are almost entirely brownish, except near the apex. *Exp. al.* 19 mm. *Abdomen* dark brownish fuscous, with a few white scales above; white beneath. *Legs* whitish.

*Type* ♂ (65416) Mus. Wlsm. (Godm-Salv. Coll.) BM.

*Hab.* GUATEMALA: RETALHULEU: Las Mercedes, 3000 ft., 1880 (G. C. Champion). Unique.

A large and conspicuous species, sufficiently distinct, but with a somewhat usual pattern emphasised by the contrast of its colouring and especially by the bluish transparency of the cilia.

## OTHER FAMILIES. (Drnt.)

The following species, with four exceptions, were not enumerated by Mr. H. Druce in his account of the Hepialidae in Vols. I-II. and of the Pyralidae in Vol. II.:—

## PYRALIDINA.

## PYRAUSTIDAE.

## STENOPTYCHA Z.

= ATOMOPTERYX Wlsm.; = CIRAPHORUS Dyar.

Type 1: *Stenoptycha coelodactyla* Z. (Z. 1863).

STENOPTYCHA Z. Stett. Ent. Ztg. **24** 154-5 Pf. **2**·12 (1863): Hor. Soc. Ent. Ross. **13** 457-60 Pf. **6**·159 (1877); Btlr. Tr. Ent. Soc. Lond. **1883** 57 (1883); Wlsm. Ent. Mo. Mag. **34** 191 (1898); Hmsn. Pr. Z. Soc. Lond. **1898** 592, 604 no. 159 (1899): **1899** 283 no. 159 tf. 159 (1899); Hrng. Stett. Ent. Ztg. **67** 138-48 sp. 1-5 (1906); Barnes & McDngh. Contr. NH. Lp. N-Am. **2** 174 Pf. **4**·6 (15. VII. 1913); Hmsn. Ann-Mag. NH. (8 s.) **12** 301-4 sp. 1-7 (IX. 1913); Dyar Pr. US. Nat. Mus. **47** 284 (1914).

Type 2: *Atomopteryx doeri* Wlsm. (Wlsm. 1891).

ATOMOPTERYX Wlsm. Ent. Mo. Mag. **27** 216-7 (1891): Nov. Lp. **1** 72-4 Pf. **12**·1 (1892).  
STENOPTYCHA Hmsn. Ann-Mag. NH. (8 s.) **12** 301-2, 304 (1913).

Type 3: *Ciraphorus elcodes* Dyar (Dyar 1910).

CIRAPHORUS Dyar Pr. US. Nat. Mus. **38** 272-3 (1910).

1. *Stenoptycha coelodactyla* Z.

= *lindigi* F. & R.<sup>6</sup>; = *zelleri* Btlr.<sup>6</sup>; = *dubitalis* Mssn.<sup>6</sup>; = †*caelodactyla* Hmsn.

*Stenoptycha coelodactyla* Z. Stett. Ent. Ztg. **24** 154-5 Pf. **2**·12 (1863)<sup>1</sup>. *Stenoptycha lindigi* F. & R. Reise Nov. Zool-Lp. **2** Pf. **140**·61 (1875)<sup>2</sup>; Z. Hor. Soc. Ent. Ross. **13** 459 (1887)<sup>3</sup>. *Stenoptycha zelleri* Btlr. Tr. Ent. Soc. Lond. **1883** 57 sp. 15 (1883)<sup>4</sup>. *Agathodes? dubitalis* Mssn., Stübel's Reise S-Am. 52 sp. 8, 170-1 sp. 192 Pf. **9**·21 (1890)<sup>5</sup>. *Stenoptycha* †*caelodactyla* Hmsn. Pr. Z. Soc. Lond. **1899** 283 sp. 1 tf. 159 (1899)<sup>6</sup>. *Stenoptycha lindigi* Hrng. Stett. Ent. Ztg. **67** 141, 143-6 sp. 3 (1906)<sup>7</sup>. *Stenoptycha coelodactyla* Hrng. Stett. Ent. Ztg. **67** 141-3 sp. 1 (1906)<sup>8</sup>; Hmsn. Ann-Mag. NH. (8 s.) **12** 301, 302 (1913)<sup>9</sup>.

Types ♂ ♀: *coelodactyla* Z. ♀ (101618, *Venezuela*) Mus. Wlsm. (*Zell. Coll.*) BM.; *lindigi* F. & R. ♂ (*Bogota*) Mus. —?; *zelleri* Btlr. ♂ ♀ (1882:107, *Las Zorras*) BM.; *dubitalis* Mssn. (*Riobamba*) Mus. —?

*Hab.* AMERICA, C-S. Central America<sup>9</sup>—MEXICO<sup>9</sup>: VERA CRUZ: Jalapa, 4000 ft., 1887 (*W. Schaus*)—COSTA RICA<sup>9</sup>: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*); Rio Sucio (*H. Rogers*). South America<sup>1-9</sup>—COLOMBIA<sup>2-3, 6, 9</sup>—VENEZUELA<sup>1, 8</sup>—ECUADOR<sup>5-6, 8</sup>—PERU<sup>7</sup>—BOLIVIA<sup>7-8</sup>—CHILE<sup>4, 6, 8-9</sup>.

## 2. *Stenoptycha elcodes* Dyar.

*Ciraphorus elcodes* Dyar Pr. US. Nat. Mus. **38** 272-3 (1910)<sup>1</sup>. *Lineodes elcodes* Dyar Ins. Insc. Mens. **1** 94, 95 (23. VIII. 1913)<sup>2</sup>.

Type ♂ (13050) US. Nat. Mus.

Hab. MEXICO<sup>1-2</sup>: VERA CRUZ<sup>1</sup>: Jalapa (*W. Schaus*)<sup>1</sup>: PUEBLA<sup>1</sup>: Tehuacan, IX. 1908 (*R. Müller*)<sup>1</sup>.

## 3. *Stenoptycha pterophoralis* Wkr.

*Hydrocampa pterophoralis* Wkr. Cat. Lp. BM. **34** 1340 (1865)<sup>1</sup>. *Stenoptycha pterophoralis* Hmsn. Pr. Z. Soc. Lond. **1899** 283 sp. 2 (1899)<sup>2</sup>: Ann-Mag. NH. (8 s.) **12** 302, 304 sp. 6 (1913)<sup>3</sup>; Dyar Pr. US. Nat. Mus. **47** 284 (1914)<sup>4</sup>.

Type ♀ (1855:1, *San Domingo*) BM.

Hab. AMERICA, C-S-I. Central America<sup>4</sup>—PANAMA<sup>4</sup>: Taboga Id., II. 1912 (*A. Busck*)<sup>4</sup>; La Chorrera, V. 1912 (*A. Busck*)<sup>4</sup>; Trinidad River, VI. 1912 (*A. Busck*)<sup>4</sup>. South America<sup>3</sup>—COLOMBIA<sup>3</sup>: (*Petersen*)—BRITISH GUIANA<sup>3</sup>: Rockstone, 25. IV—9. V. 1904 (*W. J. Kaye*). West Indies<sup>1-3</sup>—BAHAMAS<sup>3</sup>: NEW PROVIDENCE: Nassau, 1900 (*Sir G. T. Carter*)—CUBA<sup>3</sup>: Santiago, V. 1902 (*W. Schaus*)—JAMAICA<sup>3</sup>: ST. ANDREW: Constant Spring, 29. XII. 1904 (*Wlsm.*)—HAYTI<sup>1-3</sup>: SAN DOMINGO (*Tweedie*)<sup>1-3</sup>—ST. CHRISTOPHERS, XII. 1911 (*J. J. Quelch*)—ANTIGUA<sup>3</sup>: (*Saunders Coll.*).

## 4. *Stenoptycha doeri* Wlsm.

*Atomopteryx doeri* Wlsm. Ent. Mo. Mag. **27** 216-7 (1891)<sup>1</sup>: Nov. Lp. **1** 73-4 Pf. **12** 1 (1892)<sup>2</sup>. *Stenoptycha doeri* Hmsn. Ann-Mag. NH. (8 s.) **12** 302, 304 (1913)<sup>3</sup>.

Type ♂ (6269); ♀ (6270) *Petropolis*, Mus. Wlsm. BM.

Hab. AMERICA, C-S. Central America<sup>3</sup>—MEXICO<sup>3</sup>: VERA CRUZ: Jalapa, 4500 ft., 1887 (*W. Schaus*). South America<sup>1-3</sup>—COLOMBIA<sup>1-3</sup>: Jimenez, 1600 ft., III. 1907 (*W. F. H. Rosenberg*); Rio Bitaco, 4410 ft., IV. 1908 (*W. F. H. Rosenberg*)—BOLIVIA<sup>3</sup>: LA PAZ: Songo (*G. Garlepp*)—BRAZIL<sup>1-3</sup>: RIO DE JANEIRO<sup>1-2</sup>: Petropolis, 1881 (*H. Doer*)<sup>1-2</sup>: PARANA: Castro, 1898 (*E. Dukinfield-Jones*).

## 5. *Stenoptycha fontella* Wlsm.

=*\*contortalis* (nec Gn.) Hmsn., Frnld., Dyar.

*Lineodes \*contortalis* Hmsn. Pr. Z. Soc. Lond. **1899** 284 sp. 2 (1899)<sup>1</sup>; Dyar Pr. Ent. Soc. Wash. **4** 463 (1901)<sup>2</sup>; Frnld. Bull. US. Nat. Mus. **52** 394 sp. 4483 (1902)<sup>3</sup>; Dyar Ins. Insc. Mens. **1** 95, 96 (23. VIII. 1913)<sup>4</sup>. *Lineodes fontella* Wlsm. Ann-Mag. NH. (8 s.) **12** 305, 314-5 sp. 18 (1. IX. 1913)<sup>5</sup>; Dyar Pr. US. Nat. Mus. **47** 284 (1914)<sup>6</sup>.

Type ♀ (97212, *Constant Spring*) Mus. Wlsm. BM.

Hab. AMERICA, N-C-I-S. United States<sup>1-5</sup>—FLORIDA<sup>2-5</sup>: DADE<sup>2, 5</sup>: Miami, 1897 (*W. Schaus*)<sup>5</sup>—TEXAS<sup>3</sup>. Central America<sup>4, 6</sup>—MEXICO<sup>4</sup>—PANAMA<sup>4, 6</sup>: Porto Bello, V. 1912 (*A. Busck*)<sup>6</sup>; Corozal, XI. 1912 (*C. P. Crafts*)<sup>6</sup>. West Indies<sup>5</sup>—JAMAICA<sup>5</sup>: ST. ANDREW<sup>5</sup>: Constant Spring, 29. XII. 1904 (*Wlsm.*)<sup>5</sup>; Newcastle<sup>5</sup>. South America<sup>1-5</sup>

—BRITISH GUIANA <sup>4-5</sup>: Rockstone, IV-V. (*W. J. Kaye*) <sup>5</sup>; ⊕ *Physalis pubescens* (*H. W. B. Moore*) <sup>4</sup>—FRENCH GUIANA <sup>4</sup>—BRAZIL <sup>1, 5</sup>: SÃO PAULO <sup>5</sup>: São Paulo, 1889 (*E. Dukinfield-Jones*) <sup>5</sup>.

### LINEODES Gn.

= SCOPTONOMA Z.

Type 1: *Lineodes hieroglyphalis* Gn. (Gn. 1854; Hmsn. 1899).

LINEODES Gn. HN. Ins. Sp. Gén. Lp. **8** (Delt-Pyr.) 234-6 sp. 206-8 Pf. **3·6** (1854); Wkr. Cat. Lp. BM. **17** 407, 409-10 no. 2 sp. 1-3 (1859): **19** 947-8 (1859); Ldr. Wien. Ent. Mts. **7** 417 no. 123, 480-1 sp. 107 Pf. **3·13, 15·8** (1863); Wkr. Cat. Lp. BM. **34** 1327 (1865); HS. CB. ZM. Regensb. **25** 22 no. XXIII sp. 44-5 (1871): Gndlch. Contr. Ent. Cuba **1** 419 sp. 71-2 (1881); Mschr. Abh. Senck. Nat-Ges. **16** 304-6 sp. 513-5, 353 no. 347 sp. 815-7 (1890); Wlsm. Ent. Mo. Mag. **34** 191 (1898); Hmsn. Pr. Z. Soc. Lond. **1898** 592, 603 no. 160 (1899): **1899** 283-4 no. 160 tf. 160 (1899); ⊕ Dyar Jr. NY. Ent. Soc. **9** 22-3 (1901); Pr. Ent. Soc. Wash. **4** 463 (1901); Frnld. Bull. US. Nat. Mus. **52** 394-5 sp. 4483-6 (1902); Krft., Smith's Check-List Lp. Bor-Am. **91** sp. 4854-7 (1903); Hrng. Stett. Ent. Ztg. **67** 138-41, 149-60 sp. 1-7 (1906); Wlsm. Fn. Haw. **1** 469-70, 744 no. 1 sp. 1-2 Pf. **10·1-2** (1907); Dyar Ins. Insc. Mens. **1** 94-6 (23. VIII. 1913); Hmsn. Ann-Mag. NH. (8 s.) **12** 304-18 sp. 1-22 (1. IX. 1913); Wlsm. Ann-Mag. NH. (8 s.) **12** 306-7, 309-10, 314-6 sp. 3, 6, 18-19 (1. IX. 1913); Dyar Pr. US. Nat. Mus. **47** 284 (1914).

Type 2: *Scoptonoma integra* Z. (Z. 1873; Hmsn. 1913).

SCOPTONOMA Z. Verh. ZB. Ges. Wien **23:1873** Abh. 327-30 sp. 1-2 Pf. **4·44** (1873); Meyr. Tr. Ent. Soc. Lond. **1886** 2 (1886); Wlsm. Pr. Z. Soc. Lond. **1891** 493-4 (1892): **1897** 55 (1897). LINEODES Frnld. Rp. Mass. Agr. Coll. **35** 90 [=sep. p. 8] (1898).

#### 1. *Lineodes convolutalis* Hmsn.

=\**hieroglyphalis* (nec Gn.) Druce, Dyar.

*Lineodes* \**hieroglyphalis* Druce Biol. C-Am. Ins. Lp-Het. **2** 264 sp. 1 (1895) <sup>1</sup>; (p.) Dyar Ins. Insc. Mens. **1** 94, 95 (23. VIII. 1913) <sup>2</sup>. *Lineodes convolutalis* Hmsn. Ann-Mag. NH. (8 s.) **12** 304, 306 sp. 2 (1. IX. 1913) <sup>3</sup>.

Type ♀ (1904:1, *V. de Irazu*) Godm-Salv. Coll. BM.

*Hab.* COSTA RICA <sup>1-3</sup>: Volcan de Irazu, 6000-7000 ft. (*H. Rogers*) <sup>1, 3</sup>; Candelaria Mts. (*C. A. Underwood*) <sup>1, 3</sup>.

#### 2. *Lineodes gracilaris* HS.

*Lineodes* †*gracilaris* HS. CB. ZM. Ver. Regensb. **25** 22 sp. 44 (1871) <sup>1</sup>; Gndl. Contr. Ent. Cuba **1** 419 sp. 71 (1881) <sup>2</sup>; Mschr. Abh. Senck. Nat-Ges. **16** 304-5 sp. 513, 353 sp. 815 (1890) <sup>3</sup>; Hrng. Stett. Ent. Ztg. **67** 154 sp. 5 (1896) <sup>4</sup>. *Lineodes gracillalis* Hmsn. Ann-Mag. NH. (8 s.) **12** 318 (1913) <sup>5</sup>.

*Hab.* AMERICA, C-S-I. Central America <sup>4</sup>—GUATEMALA (*Fruhstorfer*) <sup>4</sup>. South America <sup>4</sup>—COLOMBIA <sup>4</sup>: Rio Magdalena, II. 1904 (*E. Pehlke*) <sup>4</sup>. West Indies <sup>1-5</sup>—CUBA (*J. Gundlach*) <sup>1-5</sup>—PORTORICO <sup>3-4</sup>.

3. *Lineodes vulnifica* Dyar.= *encystalis* Hmsn.<sup>3</sup>.

*Lineodes vulnifica* Dyar Ins. Insc. Mens. 1 94, 95-6 (23. VIII. 1913)<sup>1</sup>. *Lineodes encystalis* Hmsn. Ann-Mag. NH. (8 s.) 12 304, 308-9 sp. 5 (1. IX. 1913)<sup>2</sup>. *Lineodes vulnifica* Dyar Pr. US. Nat. Mus. 47 284 (1914)<sup>3</sup>.

Types ♂ ♀: *vulnifica* Dyar, ♂ (16004, Cayenne) US. Nat. Mus.; *encystalis* Hmsn. ♀ (65001, Grenada) Mus. Wlsm. BM.

Hab. AMERICA, C-S-I. Central America<sup>1,3</sup>—PANAMA<sup>1,3</sup>: Taboga Id., II. 1912 (*A. Busck*)<sup>3</sup>; Corozal, VII. 1912 (*J. Zetek*; *C. P. Crafts*)<sup>3</sup>. South America<sup>1</sup>—FRENCH GUIANA<sup>1</sup>: Cayenne, VI. 1904 (*W. Schaus*)<sup>1</sup>. West Indies<sup>2</sup>—St. VINCENT (*H. H. Smith*)<sup>2</sup>—GRENADA<sup>2</sup>: Mount Gay<sup>2</sup>, 300 ft., 25-30. VIII, at light (*H. H. Smith*).

4. *Lineodes monetalis* Dyar.= *dianalis* Hmsn.<sup>3</sup>.

*Lineodes monetalis* Dyar Ins. Insc. Mens. 1 94, 95 (23. VIII. 1913)<sup>1</sup>. *Lineodes dianalis* Hmsn. Ann-Mag. NH. (8 s.) 12 305, 310-11 sp. 7 (1. IX. 1913)<sup>2</sup>. *Lineodes monetalis* Dyar Pr. US. Nat. Mus. 47 284 (1914)<sup>3</sup>.

Types ♂ ♂: *monetalis* Dyar, ♂ (16003, Misanla) US. Nat. Mus.; *dianalis* Hmsn. ♂ (1899:49, São Paulo) BM.

Hab. AMERICA, C-S. Central America<sup>1,3</sup>—MEXICO<sup>1</sup>: VERA CRUZ<sup>1</sup>: Misanla, XI. 1910 (*R. Müller*)<sup>1</sup>—COSTA RICA<sup>1</sup>—PANAMA<sup>1,3</sup>: Taboga Id., II. 1912 (*A. Busck*)<sup>3</sup>; Corozal, III. 1911 (*A. Busck*)<sup>3</sup>, VI-VII. 1912 (*C. P. Crafts*)<sup>3</sup>, VII. 1912 (*J. Zetek*)<sup>3</sup>; Porto Bello, XII. 1912 (*G. F. Cleveland*)<sup>3</sup>. South America<sup>2</sup>—BRAZIL<sup>2</sup>: RIO DE JANEIRO<sup>2</sup>: Sierra Orgãos, nr. Tijuca (*E. R. Wagner*)<sup>2</sup>; SÃO PAULO<sup>2</sup>: São Paulo (*E. Dukinfield-Jones*)<sup>2</sup>.

5. *Lineodes integra* Z.

*Scoptonoma integra* Z. Verh. ZB. Ges. Wien 23:1873 Abh. 328-9 sp. 1 Pf. 4·44 (1873)<sup>1</sup>. *Lineodes integra* Frnld., Smith's List Lp. Bor-Am. 79 sp. 4142 (1891)<sup>2</sup>; Hmsn. Pr. Z. Soc. Lond. 1899 284 sp. 3 (1899)<sup>3</sup>; ⊕ Dyar Jr. NY. Ent. Soc. 9 22 (1901)<sup>4</sup>; Pr. Ent. Soc. Wash. 4 463 (1901)<sup>5</sup>; Frnld. Bull. US. Nat. Mus. 52 395 sp. 4484 (1902)<sup>6</sup>; Hrng. Stett. Ent. Ztg. 67 153-4 sp. 4 (1906)<sup>7</sup>; Dyar Ins. Insc. Mens. 1 95, 96 (23. VIII. 1913)<sup>8</sup>; Hmsn. Ann-Mag. NH. (8 s.) 12 304, 305, 313 sp. 11 (1. IX. 1913)<sup>9</sup>.

Type ♀ (101621, Texas) Mus. Wlsm. (*Zell. Coll.*) BM.

Hab. AMERICA, N-C-S-I. United States<sup>1-9</sup>—FLORIDA<sup>4-5, 8-9</sup>: DADE<sup>5</sup>: Lake Worth<sup>5</sup>, ⊕ *Solanum* spp.<sup>4-5, 8</sup>, *S. radula*<sup>4-5</sup>, *S. jasminifolium*<sup>4-5</sup>, *S. tuberosum* (= *Potato*)<sup>8</sup>—MISSOURI<sup>6</sup>—CALIFORNIA<sup>6, 8</sup>—TEXAS<sup>1, 3, 6-9</sup>: DALLAS<sup>1, 7</sup>: Dallas (*J. Boll*)<sup>1, 7</sup>, 17. IX - 16. X. 1875 (*J. Boll*). Central America<sup>8</sup>—MEXICO<sup>8</sup>. South America<sup>3, 6, 8</sup>—COLOMBIA (*Baron von Nolcken*)—BRAZIL<sup>3, 8</sup>. West Indies<sup>8-9</sup>—CUBA<sup>9</sup>: Tanamo, XII. (*W. Schaus*)—JAMAICA<sup>8</sup>—GRENADA<sup>9</sup>: Balthazar, 15-20. III, 5-10. IV., at light (*H. H. Smith*).



### 6. *Lineodes contortalis* Gn.

*Lineodes contortalis* Gn. HN. Ins. Sp. Gén. Lp. **8** (Delt-Pyr.) 236 sp. 208 (1854)<sup>1</sup>; Wkr. Cat. Lp. BM. **17** 410 sp. 3 (1859)<sup>2</sup>; Ldr. Wien. Ent. Mts. **7** 417 (1863)<sup>3</sup>; Hmsn. Ann-Mag. NH. (8 s.) **12** 305, 313 sp. 13 (1913)<sup>4</sup>.

Type ♀ (Brazil) Gn. Coll.

*Hab.* AMERICA, C-S. Central America<sup>4</sup>—MEXICO<sup>4</sup>: VERA CRUZ: Jalapa, 1887 (W. Schaus). South America<sup>1-4</sup>—BRAZIL<sup>1-4</sup>: SÃO PAULO: São Paulo (E. Dukinfield-Jones)—ARGENTINA<sup>4</sup>: CORRIENTES: Goya, 1886 (R. Perrens),

### 7. *Lineodes triangularis* Mschlr.

*Lineodes* †*triangularis* Mschlr. Abh. Senck. Nat-Ges. **16** 305 sp. 514, 353 sp. 816 (1890)<sup>1</sup>; Hmsn. Pr. Z. Soc. Lond. **1899** 284 (1899)<sup>2</sup>; ⊕ Dyar Jr. NY. Ent. Soc. **9** 22-3 (1901)<sup>3</sup>; Pr. Ent. Soc. Wash. **4** 463 (1901)<sup>4</sup>; Frnld. Bull. US. Nat. Mus. **52** 395 sp. 4486 (1902)<sup>5</sup>; Dyar Ins. Insc. Mens. **1** 95, 96 (23. VIII. 1913)<sup>6</sup>; Hmsn. Ann-Mag. NH. (8 s.) **12** 318 (1. IX. 1913)<sup>7</sup>.

*Hab.* AMERICA, N-C-I-S. United States<sup>3-6</sup>—FLORIDA<sup>3-6</sup>: DADE<sup>4</sup>: Lake Worth<sup>4</sup>, ⊕ *Capsicum frutescens* (=Pepper Plant)<sup>3-4, 6</sup>. Central America<sup>6</sup>—MEXICO<sup>6</sup>. West Indies<sup>1-2, 5, 7</sup>—PORTORICO<sup>1-2, 7</sup>. South America<sup>6</sup>—BRAZIL<sup>6</sup>.

### 8. *Lineodes mesodonta* Dyar.

*Lineodes mesodonta* (Hmsn.) Dyar Ins. Insc. Mens. **1** 94, 96 (23. VIII. 1913)<sup>1</sup>; Hmsn. Ann-Mag. NH. (8 s.) **12** 305, 313 (1. IX. 1913)<sup>2</sup>; Dyar Pr. US. Nat. Mus. **47** 284 (1914)<sup>3</sup>.

Types ♂ ♀: *mesodonta* Dyar, ♂ (Costa Rica) US. Nat. Mus.; *mesodonta* Hmsn., ♂ (101638), ♀ (101641) Colombia, Mus. Wlsm. (Zell. Coll.) BM.

*Hab.* AMERICA, C-S. Central America<sup>1, 3</sup>—COSTA RICA (W. Schaus)<sup>1</sup>—PANAMA<sup>1, 3</sup>: CANAL ZONE<sup>3</sup>: Corozal, VII. 1912 (C. P. Crafts)<sup>3</sup>. South America<sup>2</sup>—COLOMBIA (Petersen)<sup>2</sup>.

Dyar's tabulation (23 August 1913) was published a few days before Hampson's tabulation and description (1 September 1913), and, since there is sufficient descriptive matter in Dyar's tabulation to establish a species, *mesodonta* must stand as Dyar's species, founded on the specimens from Costa Rica which Schaus labelled as *mesodonta* Hmsn.!

### 9. *Lineodes aztecalis* Hmsn.

=\**contortalis* (nec Gn.) Druce.

*Lineodes* \**contortalis* Druce Biol. C-Am. Ins. Lp-Het. **2** 264-5 sp. 2 (1895)<sup>1</sup>. *Lineodes aztecalis* Hmsn. Ann-Mag. NH. (8 s.) **12** 305, 314 sp. 15 (1. IX. 1913)<sup>2</sup>.

Type ♀ (1904:1, Jalapa) Godm-Salv. Coll. BM.

*Hab.* Central America<sup>1-2</sup>—MEXICO<sup>1-2</sup>: VERA CRUZ<sup>1-2</sup>: Jalapa (M. Trujillo)<sup>1-2</sup>—PANAMA<sup>1</sup>: CHIRIQUI (Ribbe, Mus. Stgr.)<sup>1</sup>.

10. *Lineodes cyclophora* Hmsn.

=\**serpulalis* (nec Ldr.) Druce.

*Lineodes serpulalis*? Druce Biol. C-Am. Ins. Lp-Het. 2 265 sp. 3 (1895)<sup>1</sup>. *Lineodes cyclophora* Hmsn. Ann-Mag. NH. (8 s.) 12 305, 316-7 sp. 20 (1. IX. 1913)<sup>2</sup>.

Type ♂ (1904:1, *Presidio*) Godm-Salv. Coll. BM.

Hab. AMERICA, C-I. Central America<sup>1-2</sup>—MEXICO<sup>1-2</sup>: DURANGO<sup>1-2</sup>: *Presidio* (A. Forrer)<sup>1-2</sup>. West Indies<sup>2</sup>—BAHAMAS<sup>2</sup>: NEW PROVIDENCE<sup>2</sup>: Nassau (*Sir G. T. Carter, J. L. Bonhote*)<sup>2</sup>.

## HEPIALINA.

## 1. HEPIALIDAE.

## PHASSUS Wkr.

Type: *Pharmacis hübnéri* Hb-Gyr. (= *argentiferus* Wkr.; Wkr. 1856).

PHASSUS Wkr. Cat. Lp. BM. 7 1549, 1566 no. 7 (1856); Druce Biol. C-Am. Ins. Lp-Het. 1 232-4 sp. 1-5 Pf. 24·4, ·8, ·11 (1887): 2 451-2 sp. 2<sup>a</sup>, 6-7 Pf. 89·1, ·4, ·5 (1898); Stgr-Rbl. Cat. Lp. Pal. 1 410 no. 763 sp. 4723-5 (1901); Wagner & Pfitzner Lp. Cat. Junk 4 17-19 (1911).

1. *Phassus hübnéri* Hb-Gyr.

n. syn. = *argentiferus* Wkr.

*Pharmacis hübnéri* Hb-Gyr. Smlg. Exot. Schm. 3 Pf. [53]·1-2 (1837)<sup>1</sup>. *Phassus argentiferus* Wkr. Cat. Lp. BM. 7 1566 (1856)<sup>2</sup>; Druce Biol. C-Am. Ins. Lp-Het. 1 233 sp. 1 (1877)<sup>3</sup>: 2 451 (1898)<sup>4</sup>; Wagner & Pfitzner Lp. Cat. Junk 4 17 (1911)<sup>5</sup>.

Types ♂ ♀: *hübnéri* Hb-Gyr., ♂ (*Mexico*) Mus. ....; *argentiferus* Wkr., ♀ (1844:13, *Oaxaca*) BM.

Hab. Central America<sup>1-5</sup>—MEXICO<sup>1-5</sup>: VERA CRUZ<sup>4</sup>: Cuesta de Misantla (*M. Trujillo*)<sup>4</sup>; Jalapa (*M. Trujillo*)<sup>4</sup>; Atoyac (*Schumann*)<sup>4</sup>; Orizaba (*J. Flohr*)<sup>4</sup>: MORELOS<sup>4</sup>: Cuernavaca, VI. (*H. H. Smith*)<sup>4</sup>: OAXACA<sup>(=2-3)</sup>: Oaxaca (*Hartweg*)<sup>(=2-3)</sup>—HONDURAS (*Wittkugel*)<sup>4</sup>—COSTA RICA<sup>3</sup>: (*Van Patten*)<sup>3</sup>; Volcan de Irazu, 6000-7000 ft. (*H. Rogers*)<sup>3</sup>—PANAMA<sup>3</sup>: CHIRIQUI<sup>3</sup>: Volcan de Chiriqui, 2000-3000 ft., 1881-2 (*G. C. Champion*)<sup>3</sup>; (*Trötsch*).

Hübner published the generic name *Pharmacis* at three different dates for three distinct genera belonging to different families. *Pharmacis* Hb. (1822) falls as an isonym of *Hepialus* F. (1775), while ♂ *Pharmacis* Hb. (1823), *Phaloniadae*, and ♂ *Pharmacis* Hb. (1825), *Geometridae*, are both invalid as homonymous with *Pharmacis* Hb. (1822):—

## 1.

PHARMACIS Hb. Verz. Schm. 198-9 sp. 2023-5 (1822); Stph. Ill. Br. Ent. Haust. 4 407 sp. 2024-5 (1835); Hb. Smlg. Exot. Schm. 3 Pf. [53]·1-2 (1837); Mschlr. Verh. ZB. Ges. Wien 27:1877 Abh. 670 (1878)—Type: *Bombyx carna* S-D. (=2023 *ento* Hb. [*jodutta* Hb. Pf. 50·213] ♀; =2025 *carna* Hb. [Pf. 50·214] ♂)=HEPIALUS F. (1775).

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## 2.

§ *PHARMACIS* Hb. Ztr. Smlg. Exot. Schm. 2 10, [36], [38], sp. 112 Pf. [39] · 223-4 (1823); Wlsm. Ann-Mag. NH. (7 s.) 5 488 (1900) : 6 443-4 (1900); Frnld. Bull. US. Nat. Mus. 52 488 sp. 5470-1 (1902); Wlsm. Pr. Z. Soc. Lond. 1907 992-3 no. 58 sp. 117 (1908) ; Frnld. Gn. Tort. 4, 5, 16, 17-18, 26, 54 (1908)—Type : *Pharmacis sartana* Hb. (Hb. 1823) = **COMMOPHILA** Hb. (1826).

§ *AGAPETE* Hb. [Cat. Lp. Coll. Franck 98 (1826)—Type : *zoegana* L.] was printed in a mere Sale-Catalogue and cannot be regarded as coming within the Code ; moreover, it is invalidated by *Agapetes* Blbg. (1820) *Lp.*, another Catalogue-name. § *Euxanthis* Hb. [Verz. Schm. 391 sp. 3801-3 (1826)—Type : *hamana* L.] is invalidated by *Euxanthe* Hb. [Verz. Schm. 39 (1818)—Type : *eurynome* Crmr.] *Lp.* **COMMOPHILA** Hb. [Verz. Schm. 392 sp. 3811-12 (1826)—Type : *aeneana* Hb.] should be adopted for this genus.

## 3.

§ *PHARMACIS* Hb. Verz. Schm. 298 sp. 2884-5 (1825)—Type : *Geometra aestimaria* Hb. = **MACARIA** Crt. (1823).

## P O S T S C R I P T.

The following species, mentioned on page 11, is as yet unpublished :—

## TINEINA.

## Fam. 1. LAVERNIDAE (pp. 1-18).

## PAMMECES Z. (p. 11).

**Pammeces problema** (p. 11), sp. n., Wlsm.

*Antennae* simple, with pecten, longer than the forewings ; very pale ochreous. *Palpi* whitish ochreous, the porrect median joint brush-like above and at the apex beneath ; the longer erect terminal joint smooth, slender, acute, with a blackish spot beneath a little before the apex. *Head* and *Thorax* pale fawn-ochreous, with a slender whitish ochreous streak along the middle, the tegulae narrowly edged with whitish ochreous. *Forewings* very pale fawn-ochreous, the costa narrowly a little paler ; an ill-defined whitish ochreous streak, along the upper half of the cell, is dilated upward beyond the cell in the direction of the costa before the apex, where it nearly reaches a slender blackish marginal line at the base of the whitish ochreous costal cilia ; just below the apex is a shorter, slender, inverted blackish streak, beneath which the terminal cilia are again paler than the pale fawn-ochreous dorsal cilia ; a long slender ochreous hair-pencil depends from the flexus. *Exp. al.* 21-22 mm. *Hindwings* shining, sericeous, whitish ochreous ; cilia pale ochreous. *Abdomen* pale brownish ochreous. *Legs* whitish ochreous ; tibiae hairy, pale ochreous.

*Type* ♂ (68987) ; ♀ (68986) Mus. Wlsm. **BM.**

*Hab. South America*—COLOMBIA : TOLIMA : Sierra del Libano, 6000 ft. V. 1899 (*H. H. Smith*). Three specimens.

# INDEX.

[Names in small capitals refer to Families, &c.; those in roman type to the chief reference to each species included in the work; those in italics to species incidentally mentioned, synonyms, &c.]

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